



Planning for the future





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# MIYAHUNA BUSINESS PLAN 2013-2017



His Majesty King Abdullah II ibn Al-Hussein

# A letter from CEO

Miyahuna started preparing its business plan in February 2012 with the support of United States Agency for International Development (USAID) Institutional Support & Strengthening Program (ISSP).

Senior managers of Miyahuna identified six strategic objectives for the years 2013-2017. To achieve these objectives, 26 strategic elements (projects) have been identified.

In preparation for implementation, an intensive training program was provided by a professional training company to ensure the application of best practices and international standards in project management.

I am proud of what has been achieved with our friends for launching the Business Plan (2013-2017) and look forward to greater achievements during project implementation - relying on the sincere efforts, shared vision and teamwork approach of Miyahuna staff.

**Eng. Munir Oweis** April 2013



Miyahuna - Jordan Water Company is responsible for the delivery of potable water and wastewater collection in Amman. Miyahuna provides water to 98% of the 2.6 million residents of Greater Amman, covering an area of 7,579 km². Wastewater collection serves 80% of the residents. In 2012, the Minister of Water and Irrigation incorporated the City of Madaba as part of Miyahuna's service area, to be implemented in the end of 2013.

The company's customer service staff serves over 500,000 customers. Its 1,500 employees also operate and maintain two major water treatment plants with high standards of water quality management; 8,600 kilometers of water distribution pipelines; 2,800 km of wastewater collection pipelines and five small wastewater treatment plants. (Most of the wastewater is treated at As Samra Wastewater Treatment Plant, operated by a private company under contract with the Water Authority of Jordan.) Planning and support services are the backbone of Miyahuna's operations, with staff working in IT, finance, human resources and technical services.

In mid-2013, Miyahuna will receive water resources from the Disi Pipeline which will provide Miyahuna the capability to provide Amman residents with improved water supply. This is a dramatic change in water delivery. Miyahuna will have to plan for this capability to ensure the water delivery networks and wastewater collection system will be capable of providing these services.

The goal of the 2013-2017 Business Plan is to create a document which will be used by the CEO and senior managers to focus Miyahuna's activities and energies for the next five years. This Business Plan describes the Miyahuna operating environment and future challenges, and provides a detailed view of Miyahuna's 5-year Strategic Objectives. Although the business plan is based on a five year window, it will be a living document and will be updated twice per year.

Miyahuna's 2013-2017 Strategic Objectives focus on improving performance in the following areas:

- 1. Deliver water on demand to customers
- 2. Provide wastewater collection and treatment services
- 3. Prepare for improved water supply
- 4. Manage customer relations
- 5. Enhance business operations
- 6. Comply with applicable laws and regulations

Each Strategic Objective is broken down into specific activities with corresponding budget and plan for the 5-year period.

STRATEGIC OBJECTIVES	STRATEGIC ELEMENTS					
1.0 Deliver water on demand	1.1 Deliver water to customers					
to customers	1.2 Reduce physical and commercial NRW to 15%					
	1.3 Provide water connections for all requests					
2.0 Provide wastewater	2.1 Reduce blockages					
collection and treatment services	2.2 Reduce illegal inflow (quantity & quality) – customer survey					
	2.3 Implement wastewater reuse					
	2.4 Construct wastewater network connections and expansion					
3.0 Prepare for improved	3.1 Implement improvements to water network system					
water supply	3.2 Implement improvements to wastewater network system					
	3.3 Replace current meters with appropriate meters					
	3.4 Implement customer awareness program for continuous service					
4.0 Manage customer relations	4.1 Each customer receives a timely accurate invoice					
	4.2 Improve amounts collected					
	4. 3 Optimize customer satisfaction					
5.0 Enhance business	5.1 Complete GIS system-water delivery					
operations	5.2 Complete GIS System-Wastewater Collection					
	5.3 Reduce energy usage					
	5.4 Implement supply chain improvements					
	5.5 Implement a comprehensive ERP					
	5.6 Implement SCADA, Phase 2					
	5.7 Purchase Headquarters Building					
	5.8 Construct Zai Warehouse					
5.0 Comply with applicable	6.1 Keep water and wastewater quality within Jordanian standards					
laws and regulations	6.2 Review Assignment Agreement annually for potential revisions					
	6.3 Ensure a safe environment for Miyahuna employees					
	6.4 Comply with employment laws					

# **LIST OF ACRONYMS**

KPI

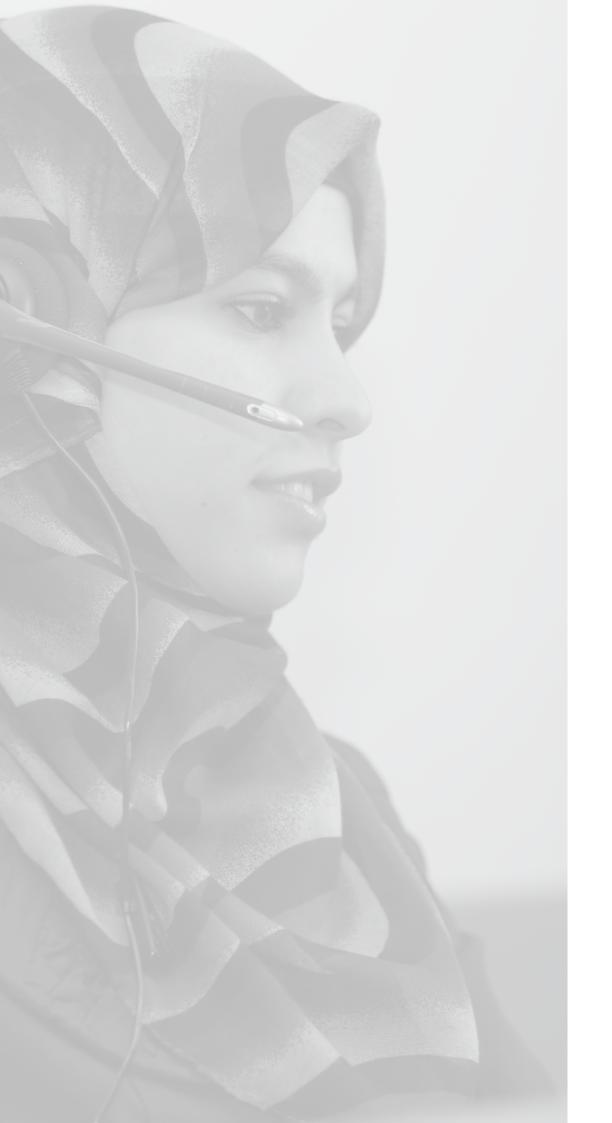
Key Performance Indicator

ВОТ	Build Operate Transfer	lpcd	liters per capita per day
CAPEX	Capital expenditures	MCM	Million Cubic Meters
CDM	Camp, Dresser and McKee	MOSP	Miyahuna Operations Support Project
Com	Communications	MWI	Ministry of Water & Irrigation
CS	Customer Service	NRW	Non-revenue Water
DZ	District Zone	OPEX	Operational expenditures
EIB	European Investment Bank	Ops	Operations
EMT	Executive Management Team	P&Q	Production and Quality
ERP	Enterprise Resource Planning	PPE	Personal Protective Equipment
Fin	Finance	PRV	Pressure Reducing Valve
FOG	Fat, oil and grease	SCADA	Supervisory Control and Data Acquisition
GAM	Greater Amman Municipality	TS	Technical Services
GIS	Geographic Information Systems	USAID	United States Agency for International Development
HR	Human Resources	WAJ	Water Authority of Jordan
HSE	Health and Safety Environment	WIP	Water Investment Plan
IT	Information Technology	WTP	Water Treatment Plant
JVA	Jordan Valley Authority	WWTP	Wastewater Treatment Plant
KAC	King Abdullah Canal		

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Miyahuna, incorporated as Jordan Water Company LLC, is responsible for the delivery of potable water and wastewater collection to the population in Amman, Jordan, in addition to some areas outside Amman. In January 2007, Miyahuna assumed water and wastewater operations from LEMA, who had contracted with the Water Authority of Jordan (WAJ) to operate the water system since 1999. Later in 2007, Miyahuna signed a 99 year Assignment and Development Agreement with WAJ giving Miyahuna the authority to operate and maintain the water and wastewater systems in Amman, including: Zai and Zara Ma'in Water Treatment Plants (WTP's); operation and maintenance of the water distribution network, operation and maintenance of the wastewater collection network, and operation of several small Wastewater Treatment Plants (WWTP's).

Miyahuna is incorporated under the laws of the Kingdom of Jordan as a Limited Liability Company and is headed by a Chief Executive Officer (CEO) who is appointed by the management committee and is supported by seven directors. Currently, Miyahuna has 1,500 active employees, employed in seven directorates and other various units.

Miyahuna operates two major water treatment plants. Zai WTP (design capacity: 90 MCM/ year) primarily draws water from the King Abdullah Canal. This plant utilizes conventional treatment processes. The Zai WTP is located in Salt. The Zara Ma'in WTP (design capacity: 48 MCM) is located in the Jordan Valley near the north end of the Dead Sea. This plant utilizes reverse osmosis as its water treatment process.

The distribution network services 98% of Amman's 2.6 million residents. The network is comprised of 8,600 km of primary, secondary, and tertiary pipelines. Water is delivered for an average of 32 hours per week. In mid-2013, the Disi Water project is scheduled to begin delivery of water from the Disi aquifer, near Aqaba. This will provide Miyahuna with the water resources which will enable it to provide improved service to the residents of Amman.

The wastewater collection system serves 80% of Amman residents and is comprised of 2,800 km of collection pipeline. More than 90% of the wastewater is collected and transported to Al-Samra Wastewater Treatment Plant (WWTP) located in Zarqa Governorate. This WWTP is operated by a BOT contactor managed by WAJ.

# Purpose of the Business Plan

Miyahuna has prepared a business plan for the five year period from 2013-2017. The purpose of the Miyahuna's Business Plan encompasses the following areas:

- Define the activities and resources available to Miyahuna through the incorporation, agreements and laws relating to Miyahuna
- Identify projections of the population served, water demand, water resources and wastewater flow expected in the time period 2013-2017
- Illustrate the strategic elements for 2013-2017, outline the action plans which designated coordinators prepared to accomplish the strategic elements goals in the 5-year timeframe of the business plan
- Project the financial impact on Miyahuna of implementing the events and action plans
- Provide the relevant information for the Executive Management Team to make informed decisions on priorities.

### **Business Plan Goal**

The goal of the business plan is to create a document which will be used by the CEO and senior managers to focus Miyahuna's activities and energies for the next five years. Starting in mid-2013, Miyahuna will receive water resources from the Disi Pipeline which will provide Miyahuna the capability to provide Amman residents with improved water delivery. This is a dramatic change in water delivery. Miyahuna will have to plan for this capability to ensure the water delivery networks and wastewater collection system will be capable of providing these services.

# Miyahuna's Business Plan

The business plan is intended to be used by Miyahuna managers as a reference guide to the operations of Miyahuna taking into consideration the activities and events projected to occur for the next five years. Although the business plan is based on a five year window, it will be a living document and will be updated twice per year. As with all business plans, as soon as the plans are documented, events occur which change it.

The business plan is segregated into seven sections:

- 1. Introduction
- 2. Legal and Contractual Basis
- 3. Miyahuna Organization
- 4. Revenue sources
- 5. Water Demand, Water Supply & Wastewater collection
- 6. Business Planning Process
- 7. Financial Projections

# **Major Planning Situation**

Improved water supply will challenge Miyahuna to meet the following situations:

- Technical: need to prepare the network, including metering to receive additional water flow
- Operational: maintain additional water flow to customers
- Institutional: capacity to develop
- Water sustainability: provide sufficient water to blend with Disi water



# Introduction

This Section is an overview of the legal and contractual basis within which Miyahuna is obliged to operate. Miyahuna's primary function is to operate as a provider of potable water and collector of wastewater to the residents and industries of Amman. Since Miyahuna does not own the assets it manages, it provides operational services to ensure the residents receive water and disposal of wastewater.

The legal documents, principal contracts, and laws under which Miyahuna must operate are:

- Jordanian Companies` Law Number (22) of 1997.
- Water Authority of Jordan Law Number (18) of 1988.
- Subscription in Drinking Water Regulation Number (67) of 1994.
- Wastewater Regulation Number (66) of 1994
- Miyahuna's incorporation documents
- The Assignment and Development Agreement With WAJ
- Bulk Water Agreement
- Jordanian Laws directly affecting Miyahuna

# **Incorporation & Business License**

In October 2006, Miyahuna was incorporated as a Limited Liability Company under the Jordanian Companies Law 22 of 1997. The legal requirements for establishing the incorporation framework of Miyahuna is established in the WAJ Law and is detailed in the corporation laws of the Kingdom. WAJ owns 100% of Jordan Water Company's (Miyahuna) shares and the WAJ Board of Directors acts as the General Assembly of Jordan Water Company. The duties of the General Assembly are set out in the incorporation papers. This ownership of Miyahuna by WAJ causes Miyahuna to be classified as a government owned business, thereby subjecting Miyahuna to the laws which apply to such corporations.

The incorporation documents, which were last modified in 2011, calls for a seven member Management Committee, three members are ex officio (because of their position) and four members are required to be from the private sector, outside of the government. The private sector Management Committee members are nominated by the Minister of Water and Irrigation and appointed for four year terms by the WAJ Board of Directors, acting as the General Assembly.

The current members of the Management Committee are shown in Table 1.

Table 1. Miyahuna Management Committee Members

Name	Position		Position
Eng. Abd-Alrahman Al-Khateeb	Chairman	Private sector	Business Consultant
Eng. Tawfiq Habashneh	Vice-chairman	Ex officio	Secretary General, Water Authority of Jordan
Eng. Sa'ad Abu Hamour	Member	Ex officio	Secretary-General, Jordan Valley Authority
Dr. Saleh Kharabsheh	Member	Ex officio	Secretary General, Ministry of Planning and International Cooperation
Eng. Marwan Boshnaq	Member	Private Sector	General Director, Jordan Electricity Company
Mr. Basem Khaleel Al-Salem	Member	Private sector	President, Association of Banks of Jordan
Ziad Al-Hamsio	Member	Private Sector	Chairman, Amman Chamber of Industry

The incorporation documents provide the Board of Directors with the following powers and responsibilities:

- Full authority to manage the company within the limits of its internal procedures
- Prepare annual budget and final accounts of the company, including profit and loss account and the necessary clarifications
- Prepare the annual report and submit the annual report to the general assembly of the company at its regular annual meeting, including any audit reports
- Delegate to CEO the ability to represent the company and to borrow any amount of money to achieve the goals of the company, issue bonds, or commitment to loans needed for the operation of the company
- Perform a comprehensive review of the company's major business units, financial performance, and operational actions by the CEO and senior management
- Analyze key risks and opportunities facing the company
- Review memos from CEO about the functioning of the company
- Review external audit reports from participants regarding the topics useful to directors such as capital adequacy, liquidity, for example
- Review of the roles and responsibilities of directors and administrators according to applicable law and the evaluate management performance
- Form committees such as the internal audit committee, and the Committee on Procurement
- Appoint and terminate the appointment of company CEO and company directors
- Define authority and responsibility of the directors and officers as specified in the job description to be established by the Management Committee

# Miyahuna's Main Activities

Miyahuna has been permitted to perform the following activities:

- Water distribution
- Wastewater collection
- Disposal of treated wastewater
- Water supply
- Access to water sources

# **Assignment and Development Agreement**

In January 2007, Miyahuna and WAJ signed an Assignment and Development Agreement in which WAJ assigned to Miyahuna the operations and maintenance of the water and wastewater networks, operation of Zai and Zara Ma'in Water Treatment Plants, certain wastewater treatment plants, and other miscellaneous operations for customers in Amman. The term of the Assignment Agreement is for 99 years. These assignments are in accordance with provisions of the WAJ Law. The Assignment Agreement includes an Appendix, which provides specific details to the Assignment Agreement. Since the original Agreement there have been several clarifications to the Assignment Agreement.

Major Provisions of the Assignment Agreement are outlined in the sections below.

#### Appendix 4.1 Services - General

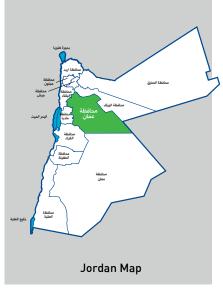
Within the service area, Miyahuna shall:

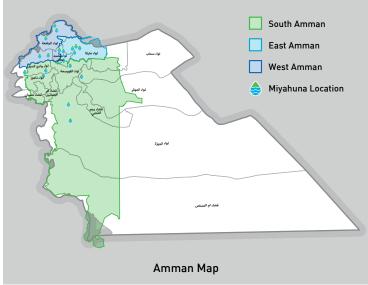
- Operate, maintain, and monitor existing, under-construction, and future facilities to extract, pump, treat, and deliver water from the wells and Zai KAC water conveyance and treatment system, Zara Ma'in, and Abu Zighan Plant.
- Operate, maintain, and monitor existing, under-construction, and future wastewater treatment facilities of Abu Nusseir and Wadi Esseir and other future projects and/or treatment works
- Operate, maintain, and monitor the existing, under-construction, and future distribution and storage for water supply and wastewater collection systems
- Provide and maintain consumption meters and billing, collection, and customer services
- Plan, finance, and implement normal capital investments and expansion plans to expand water distribution and wastewater collection to timely meet demand
- Ensure that the facilities are at all times in compliance with the indicative quality standards
- Coordinate with WAJ the timely provision of bulk water and development of additional bulk water and wastewater treatment facilities to timely meet demand

#### Appendix 6.1 - Service Area, Greater Amman Municipality

This section defines Miyahuna's service area, which is located within the Greater Amman Government. It comprises approximately 7,579 km². Also included is Qatraneh wells area. Figure 1 illustrates Miyahuna's service area.

Figure 1: Miyahuna Service Area





In 2012, the Minister of Water and Irrigation incorporated the City of Madaba as part of Miyahuna's service area. The legal structure has not been decided.

#### Appendix 6.2-Water Resources Available to Miyahuna

Miyahuna receives water from the following sources outside its service area:

- King Abdullah Canal
- Walla
- Lajjoun
- Khaw Pumping Station
- Zara Ma'in Water Treatment Plant and conveyance system
- Abu Zighan

Water from the Disi pipeline is expected to become available to Miyahuna in mid-2013.

#### Appendix 6.3-Wastewater Treatment Facilities Available to Miyahuna

- Abu Nusseir
- Wadi Esseir

#### Section 2.3 Revenues

WAJ assigns to Miyahuna:

- The authority to levy, collect, and retain all customer charges, fees, and any other income resulting from providing services
- All revenue generated from collecting sewerage within the service area
- Contributions, pursuant to Article 21 of the WAJ Law, amounting to 3% of the annual rental values of properties located within the service area

#### Section 2.4 (b) Assets

The Fixed and Mobile Assets register and associated values in Appendices 1 and 2 are non-exhaustive and represent the

- (i)Fixed assets owned by WAJ that will not be transferred to Miyahuna yet will be fully handed over and/or made available to Miyahuna for use and operation under the Assignment Agreement
- (ii) Mobile assets owned by WAJ that will be fully transferred to Miyahuna

#### Section 2.5 Accounts Receivable

Accounts receivable have been assigned to Miyahuna and have been collected by and belong fully to Miyahuna.

### **Key Performance Indicators (KPI)**

As part of the Assignment Agreement, Miyahuna is required to maintain an agreed level of performance. Miyahuna's performance is measured by a set of key performance indicators. Miyahuna provides performance indicators to WAJ from which the WAJ Planning Management Unit calculates the Key performance indicators.

### **Amendments to Assignment Agreement**

An amendment to the Assignment Agreement provides that Miyahuna will provide to WAJ a payment for the Water Authority contribution. This charge is for the use of the WAJ infrastructure utilized by Miyahuna. This annual contribution is set at 95% of the net income before the expense of the right to use water authority's infrastructure.

# Water Authority of Jordan Law No. 18

Because the responsibilities were assigned to Miyahuna and not legislated, several sections of the WAJ law apply to the business operations of Miyahuna.

## **Jordanian Laws**

Two Jordanian Laws, the Fiscal Surpluses Law No. 30/2007 and Government Audit Bureau Law No. 28/1952 apply to Miyahuna. A summary of the major provisions of these laws are as follows:

#### Fiscal Surpluses Law

Jordanian Law #30/2007 applies to wholly owned government companies. The major provisions affecting Miyahuna are:

- Miyahuna's annual budget should be submitted to the Ministry of Finance, General Budget Office for review by 15 November
- Miyahuna prepares Audited Financial Statements by April 30
- Supply any financial surplus to the Treasury

#### **Government Audit Bureau Law**

In the Governmental Audit Bureau Law (No. 28/1952), the Government Audit Bureau has the right to audit any company in which the government owns 51% or more of the company's stock. Because Miyahuna is wholly owned by WAJ, it is subject to the provisions of this law.

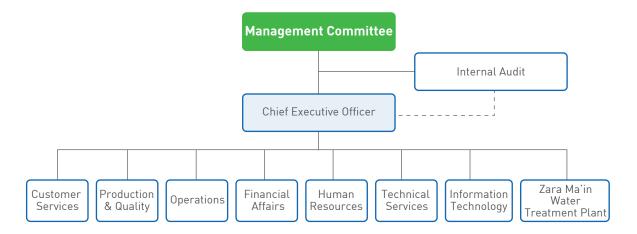




# Introduction

Miyahuna is headed by a Chief Executive Officer appointed by the Board of Directors. The current CEO is Engineer Munir Oweis. In 2011, the Board of Directors appointed Eng. Oweis to a three year term as CEO. The CEO is supported by seven Directors, who are responsible for the operations of their respective departments. These directors are appointed by the Board. Additionally, the Plant manager of the Zara Ma'in Water treatment Plant reports to the CEO. Miyahuna organization is show in Figure 2.

Figure 2: Miyahuna Organization

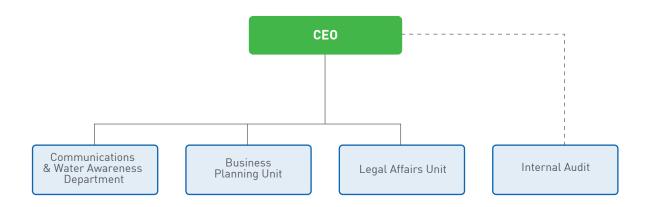


The Directorates are responsible for activities as outlined in the sections below.

# **General Management Directorate**

The CEO supervises the directors, Plant Manager of the Zara Ma'in Water Treatment Plant, and as head of General Management Directorate supervises the Heads of Communications and Public Awareness Department, Business Planning Unit and Legal Affairs Unit. The General Management Directorate is organized as presented in Figure 3.

Figure 3: General Management Directorate



These unit are responsible for the following activities:

#### • Communications & Water Awareness Department

- Supports Miyahuna's mission through communications, community outreach and education programs

#### • Business Planning Unit

- Develops business plans
- Tracks internal and external Key Performance Indicators (KPI's)
- Prepares Miyahuna's Annual Report
- Prepares monthly water and wastewater projects report for MWI
- Performs other duties, as assigned

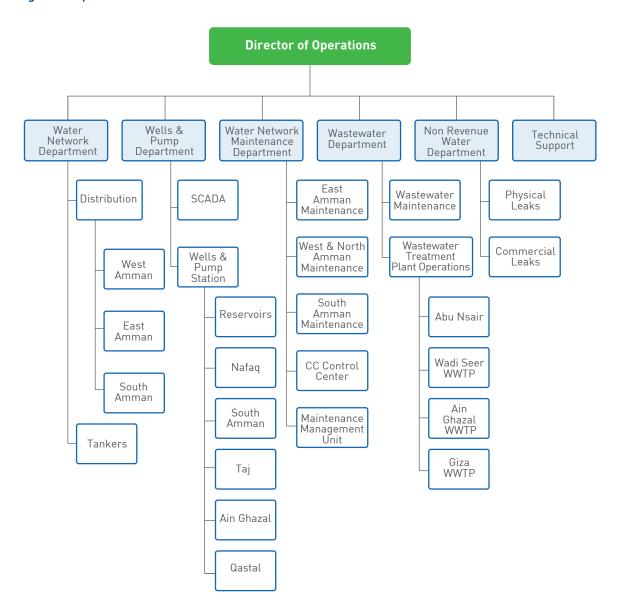
#### • Legal Affairs Unit

- Provides legal consultation
- Manages legal activity

# **Operations Directorate**

The Operations Directorate is responsible for the distribution of potable water to Miyahuna's customers, collection of wastewater, some limited treatment of wastewater and maintenance of the water network including reduction of the leakage aspect of non-revenue water. The Operations Department is responsible for operating and maintaining all of Amman's pumps stations, distribution pipelines, wastewater treatment plants, buildings and equipment. The Operations Directorate is organized as shown in Figure 4.

Figure 4: Operations Directorate



The Operations Directorate is comprised of the following five Departments:

- Water Network Department: Responsible for operations of water distribution network
- Wells and Pump Stations Department: Responsible for extraction from local wells, operations of pump stations, and operates the SCADA network
- Water Network Maintenance Department: Responsible for water network maintenance
- Wastewater Department: Responsible for waste water collection on operation of wastewater treatment plants
- Non-revenue Water Department: Responsible for investigation and reduction of non-revenue water

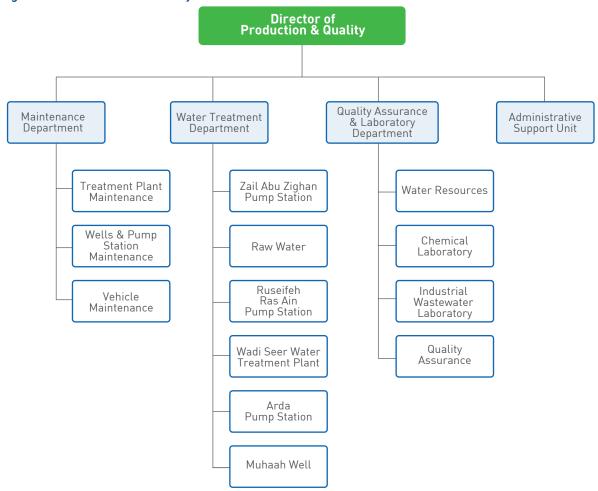
# **Production and Quality Directorate**

The Production and Quality (P&Q) Directorate is responsible for producing water to provide Miyahuna service area with drinking water which complies with the Jordanian water regulations and standards and maintaining all Miyahuna electro-mechanical facilities and vehicles. The P&Q Directorate has the following objectives:

- Provide drinking water treatment using physical and chemical treatment
- Maintain with the exception of Zara Ma'in, water production facilities and Miyahuna equipment
- Monitor the quality of drinking water from source to customer meter
- Monitoring wastewater effluent from wastewater treatment plants to ensure the effluent meets the specifications of treated water according to wastewater standards

The Directorate is organized as shown in Figure 5.

Figure 5: Production and Quality Directorate



The responsibilities of the departments of the Production and Quality Directorate are as follows:

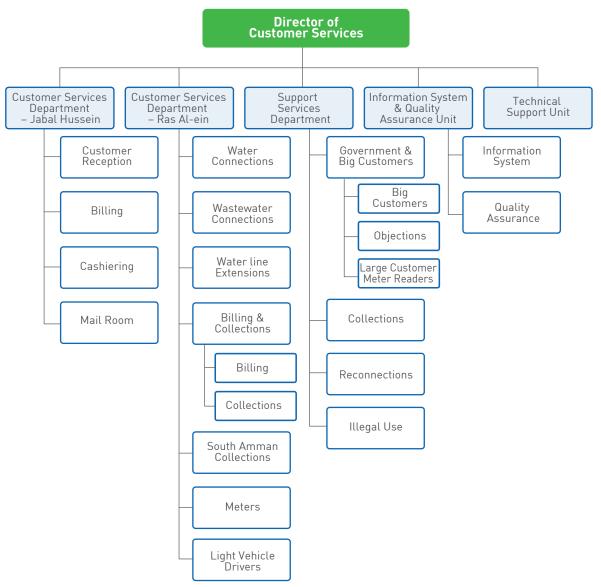
- Water Treatment Department: Responsible for the operations of the transmission pipeline from KAC to Zai WTP, operations of Zai WTP, and the transmission pipeline for Salt to Dabouq Reservoir. The capacity of the Zai WTP is 90 MCM/year.
- Maintenance Department: Responsible for the maintenance and repairs related to operations of the transmission pipeline from KAC to Zai Water Treatment Plant, operations of Zai Water Treatment Plant, the transmission pipeline for Salt to Dabouq Reservoir, and maintenance of wells and pump stations. Also, responsible for Miyahuna vehicle fleet maintenance.

- Quality Assurance & Laboratory Department: Responsible for conducting quality testing for Zai Water Treatment Plant, Zara Ma'in Water Treatment Plant, the wastewater treatment plants, and distribution and collection networks to ensure compliance with environmental permits. Provides tests for internal analysis.
- Administrative Support Unit: Responsible for administrative functions at the Zai Water Treatment

### **Customer Services Directorate**

The Customer Services Directorate is responsible for servicing the Amman customers. There are two main customer services locations and nine satellite offices located throughout Amman. This Directorate is responsible for billing customers and collecting bills. Additionally, the Customer Services Directorate is responsible for installation of water connections (except those connections greater than 500 meters from the connection point) and wastewater connections. Also, the Customer Services Directorate is responsible for the commercial loss aspect of (NRW). The organization of the Customer Services Directorate is shown in Figure 6.

Figure 6: Customer Services Directorate



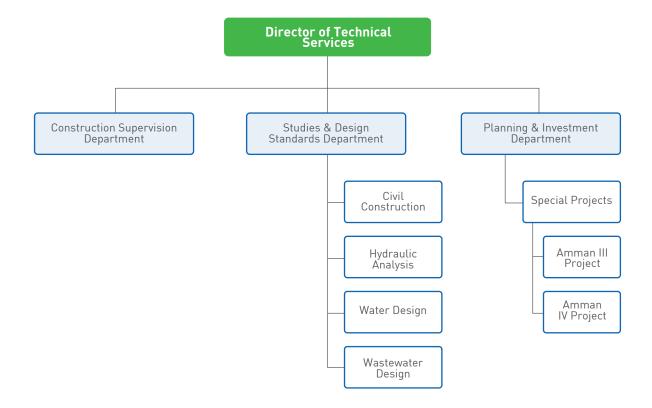
The responsibilities of the Departments of the Customer Services Directorate are as follows:

- Customer Services Jabal Hussein: Responsible for billing and collections and maintenance of customer accounts
- Customer Services Ras Al-ein: Responsible for billing and collections, and maintenance of customer accounts, water connections, and wastewater connections
- Support Services: Responsible for billing and collections of big customers and governmental customers, objections, illegal use, past due collections, and reconnections
- Information System and Quality Assurance Unit: Responsible for management of the customer information system (X7 billing software) and quality assurance
- Technical Support Unit: Provides technical assistance on customer service

### **Technical Services Directorate**

The Technical Services Directorate is responsible for Miyahuna facility planning, design and construction and related support. The organization of the Technical Services Directorate is shown in Figure 7.

Figure 7: Technical Services Directorate



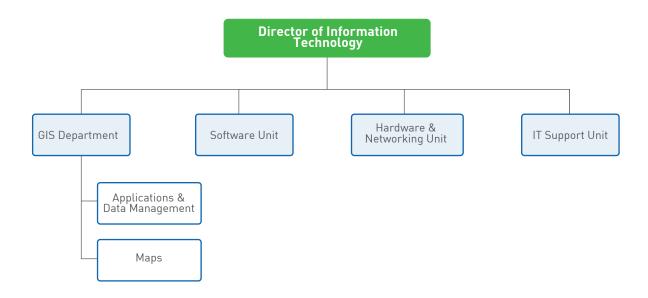
The departments and the departmental responsibilities are as follows:

- Construction Supervision Department: Responsible for working with consultants and contractors to ensure that work is performed in a manner consistent with Miyahuna's standards
- Studies and Design Standards Department: Design, study, and prioritize water and wastewater network requests, both from Miyahuna directorates and customers. Prepare tender documents for construction. Manage consultancy (outsourcing) services
- Planning and Investment Department manages the capital improvement program (CAPEX) and plans the infrastructure required to expand the water and wastewater network

# **Information Technology Directorate**

The Information Technology Directorate is responsible for GIS and operating and maintaining the developing process automation, LAN network, data base, and data archiving. The organization of the Information Technology Directorate is shown in Figure 8.

Figure 8: Information Technology Directorate



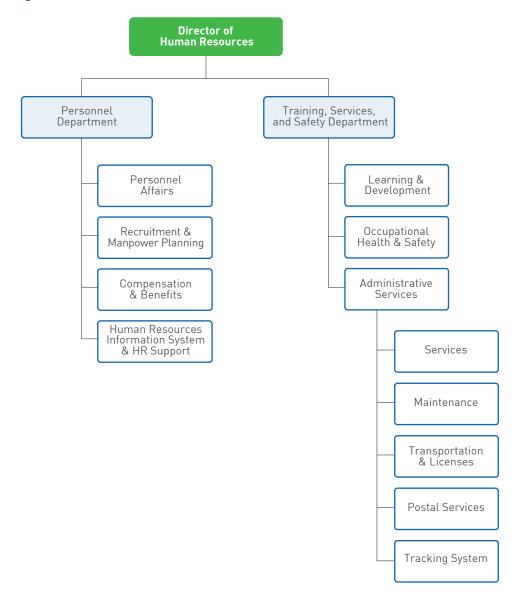
The responsibilities of the departments and units of Information Technology Directorate are as follows:

- GIS Department: Responsible for operating and maintaining GIS software, GIS mapping, and GIS data base maintenance
- Software unit: Responsible for maintaining Miyahuna software and operating systems
- Hardware and Network Unit: Responsible for the maintenance and operation of computer hardware and operation of Miyahuna LAN network
- IT Support Unit: Provides Help Desk services to other Miyahuna Directorates

## **Human Resources Directorate**

The Human Resources Division maintains employee records, handles employee recruiting and orientation, administers employee benefits, and oversees training. The organization of the Human Resources Directorate is shown in Figure 9.

Figure 9: Human Resources Directorate



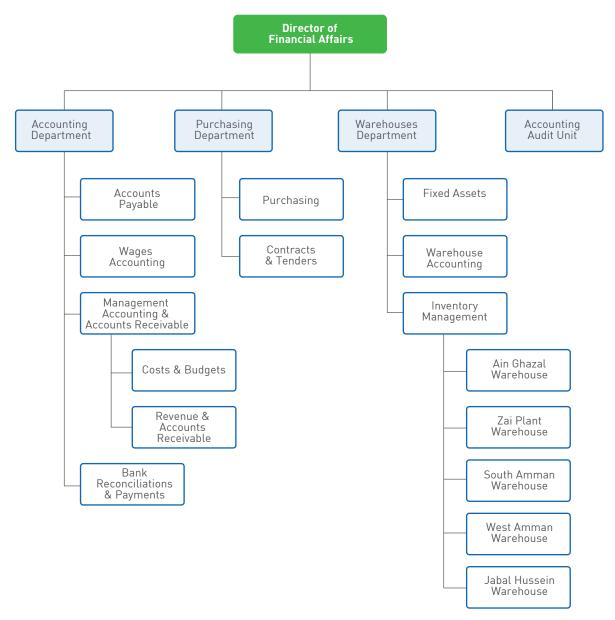
The Departments and their responsibilities are as follows:

- Personnel Department: Responsible for employee affairs, recruitment and manpower planning, employee compensation, and payroll calculation
- Training, Services and Safety Department: Responsible for training and employee development, occupational safety and administrative services including telephone reception, transportation, and building maintenance

## **Financial Affairs Directorate**

The Financial Affairs (Finance) Directorate is responsible for the financial activities of Miyahuna. The Directorate is responsible for accounting, budgeting, investment of excess funds, purchasing (including procurement and tendering), and warehouse operations. The organization of the Financial Affairs Directorate is shown in Figure 10.

Figure 10: Financial Affairs Directorate



The Departments within the Finance Directorate are as follows:

- Accounting Department is responsible for the financial administrative functions including financial reporting, budgeting, cash payments, and payroll processing
- Purchasing Department: The Procurement Division is responsible for purchasing, renting, leasing or otherwise acquiring goods and services. This division also manages vendor relationships and the disposal of surplus property.
- Warehouses Department: Responsible for operations of Miyahuna's warehouses
- Accounting Auditing Unit: Responsible for the auditing of financial transactions and support of fiscal controls

# **Zara Ma'in Water Treatment Plant**

Located in the Jordan Valley, Zara Ma'in is a reverse osmosis plant providing 38 MCM per year to Miyahuna. The plant has a design capacity of 48 MCM. The Plant manager reports directly to the CEO.

### **Internal Audit**

The Internal Audit is responsible for the internal audit function within Miyahuna. The Head of Internal Audit is responsible to the Board of Directors for technical operation. Administratively, he reports to the CEO. Internal Audit examines records and procedures designed to reduce the risk of fraud and ensure management policies are being properly executed.

# **Staffing**

Currently, Miyahuna has 1,571 employees, 1,465 active positions and 106 vacant positions till the end of April 2013. The staffing levels in each directorate are shown in Table 2.

Table 2: Miyahuna Employees by Directorate

Directorate	Authorized Positions	Active Positions	Vacant Positions
General Management	12	8	4
Operations	590	556	34
Production & Quality	216	200	16
Customer Service	448	432	16
Information Technology	28	22	6
Technical Services	59	51	8
Human Resources	63	48	15
Finance	50	50	0
Zara Ma'in WTP	100	93	7
Internal Audit	5	5	0
Total	1,571	1,465	106



# Introduction

Miyahuna obtains its revenues from two primary sources: tariffs and a 3% property tax. The tariff is established for several factors: water delivery services, wastewater collection services, meter fee, water network connection services, and wastewater connection services.

### **Tariffs**

#### **Tariff Setting Responsibilities**

In Jordan, the tariff setting responsibilities rest with the Cabinet, which sets the tariff for the entire Kingdom. Currently, Jordan has two tariffs, one for Amman and Aqaba (companies` tariff) and a second for the remainder of the country (Governorate's Tariff). The recommendation for a change in the tariff is made to the Cabinet by the Minister of Water and Irrigation. WAJ as the country's body responsible for water delivery reviews the cost of service and prepares the tariff increase request for the Minister. Miyahuna has no defined responsibilities in the tariff setting activities.

### **Current Tariff**

In May 2012, the Cabinet of Ministers increased the current tariff, raising the tariff for the three upper tiers. The first tier remained unchanged. In May 2012, the commercial tariff was increased.

The invoice is comprised of three charges:

- fixed fee to cover administrative costs not related to water consumption
- charges for water usage based on consumption
- charges for sewage collection and treatment based on consumption

Table 3 shows the current residential water and sewage tariff.

Table 3: Water and Sewage Tariff-Residential

Consumption tier	Quarterly Consumption range (m³)	Fixed fee (JD)	Unit price of water (JD)	Unit price of sewerage (JD)	Factor
1	0 – 18	2.430	2.130*	0.600*	1.00
2	19-36	4.080	0.145	0.040	1.00
3	37-54	5.730	0.500	0.250	1.00
4	55-72	5.730	0.850	0.450	1.10
5	72-90	5.730	1.000	0.600	1.15
6	91-126	5.730	1.400	0.700	1.15
7	<b>→</b> 126	5.730	1.600	0.800	2.00

\*Fixed charge

Table 4: Water & Sewage Tariff, Non-residential

Consumption tier	Quarterly Consumption range (m³)	Fixed fee (JD)	Unit price of water (JD)	Unit price of sewerage (JD)
1	0 - 6	6.000*	7.800*	4.200*
2	→ 6	7.800	1.300	0.750

### **New Connection Fees**

#### **Water Service Connections**

New connection fees for water service range begin a minimum of 245 JD (residential use) and 325 JD (non-residential use). The exact amount charged depends on the property size and the real estate use of the property (residential or non-residential).

#### **Wastewater Connection Fees**

The connection fees for sewerage service depend on the type of use (residential or non-residential) and the following factors:

- Property size
- Property use
- Municipal classification of the neighborhood
- Distance for sewerage network

## **Taxes**

WAJ assigned to Miyahuna the right to use the 3% annual rental value of property taxes collected in the service area. This tax is collected by the Greater Amman Municipality (GAM) and remitted to Miyahuna.



# Introduction

The population in Amman continues to grow at approximately 2% per year. This growth in population results in 25,000 new connections per year. The number of non-residential connections is 6% of total customers, so the number of non-residential customers is small in proportion to the total number of customers.

Currently, water demand is greater than water supply; however, with the arrival of Disi water in mid-2013, and the potential for additional water supply to residential customers, this situation will be reversed. The allocation of water from the current sources will be altered with the arrival of a new water source. However, because of the need to mix current sources with Disi water, the current sources will continue to be utilized.

# **Population**

CDM Smith recently completed a USAID funded, three-year study for water and wastewater planning. In this report, the consultant estimated the population in five year increments starting in 2010 through 2035. To estimate the population for the five years, 2013-2017, the Business Planning Team utilized the projections in the report for 2010, 2015, and 2020 and used a straight line trend to estimate the population for the years 2013-2017. Using the population figures from the report, the population is estimated to be as shown in Table 5.

Table 5: Population-Amman

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Population-Amman	2.22	2.28	2.33	2.39	2.45	2.50	2.56	2.61	2.67	2.73	2.79

Population in million inhabitants

The graphic representation of the population is illustrated in Figure 11:

Figure 11



In the past five years this population growth has resulted in 25,000 new connections per year being added to the customers' data base.

The inflow of refugees, as happens with unrest, such as the Iraq War and is currently happening in Syria may cause the population estimates to increase.

### **Customers - Water**

Miyahuna currently has approximately 500,000 customers. For the years 2007-2011, the number of connections has grown at an average of 5% for both residential and non-residential customers. It is expected this trend will continue for the future. Using this trend it is estimated that Miyahuna will have nearly 700,000 customers by 2017. The projection of the number of water customers is shown in Table 6. Residential customers comprise 94% of Miyahuna's customers.

Table 6: Subscriber Accounts

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Household type											
Residential	376,170	401,838	423,939	447,167	477,146	501,003	526,053	552,356	579,974	608,973	639,421
Increase		25,668	22,101	23,228	29,979	23,857	25,050	26,303	27,618	28,999	30,449
Percentage increase		7%	5%	5%	7%	5%	5%	5%	5%	5%	5%
Other types											
Big customers	713	716	729	736	737	774	813	853	896	941	988
Governmental	3,483	3,640	3,817	3,946	3,670	3,854	4,046	4,248	4,461	4,684	4,918
Non-residential	20,847	22,013	23,041	24,243	25,324	26,590	27,920	29,316	30,781	32,321	33,937
Total	25,043	26,369	27,587	28,925	29,731	31,218	32,778	34,417	36,138	37,945	39,842
Increase		1,326	1,218	1,338	806	1,487	1,561	1,639	1,721	1,807	1,897
Percentage increase		5%	5%	5%	3%	5%	5%	5%	5%	5%	5%
Total-Customers	401,213	428,207	451,526	476,092	506,877	532,221	558,832	586,773	616,112	646,918	679,264

A graphic projection of the estimate of the number of customers is shown in Figure 12.

Figure 12



# **Customers - Wastewater Collection**

The number of customers for wastewater collection is approximately 80% of the number of water customers and the flow received is approximately 82% of the billed flow.

### **Water Demand**

To project demand, the Business Planning Team used the European Investment Bank (EIB) funded Miyahuna Operations Support Project (MOSP) estimates of demand for 2010, 2015, and 2020 which are provided in the MOSP, Phase 2 Draft Report. The years from 2007-2017 were estimated utilizing trends for the years between the MOSP projections. Demand results and projections are included in Table 7.

# Water Supply

Currently, water delivered to Amman customers comes from six primary sources:

- Zai Water Treatment Plant: Surface water from King Abdullah Canal (KAC). At the Dir Allah intake KAC water is mixed with desalinated water from Abu Zighan Desalination Plant and pumped to Zai Water Treatment Plant. Treated water from the Zai WTP is pumped to Dabouq Reservoir. The capacity of Zai WTP is 90 MCM per year.
- Zara Ma'in Water Treatment Plant: Receives water from Mujib Dam, Zara Springs, and Zara Ma'in Wadi. The plant uses reverse osmosis technology to treat water. Treated water is conveyed from the Jordan Valley by six pump stations to Muntazah Reservoir. The capacity of Zara Ma'in WTP is 48 MCM per year
- Local springs and wells include:
  - Ras Al-ein
  - Wadi Sier
  - Qatrana
  - Suwaga
  - Muwaggar
  - Taj
  - Rusaifa
- Water sources outside of GAM
  - Khaw transmission pipeline (Zarga)
  - Wala transmission line (Madaba)
  - Lajjoun wells (Karak Governorate)

When Disi water becomes available in mid-2013, Miyahuna will receive the delivered water in its reservoirs for mixing. In 2013, Miyahuna is expected to receive approximately 40 MCM. After 2013, the estimate is that Miyahuna will be allocated 60 MCM per year of Disi water. This allocation has not been officially established. This will change the current source of supply. The changes are as follows:

- Khaw transmission pipeline will stop
- Wala wells will stop
- Lajjoun wells will stop
- Local springs and wells will be used to supplement supply to meet water demand

Additionally, the Ministry of Water and Irrigation has determined the mixing ratio of Disi to local water should be on a ratio of 1:1. If 90 MCM of Disi water is delivered to Amman, the effect on Miyahuna is the Zai and Zara Ma'in WTP's will need to operate at near current production rates to supply enough water for mixing with Disi water. The local wells can be reduced over time, which will help the aquifers replenish themselves.

The past allocation from the various sources and projected future allocations are shown in Table 7.

Table 7: Water Supply & Allocation compared to Water Demand

	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Est	2013 Est	2014 Est	2015 Est	2016 Est	2017 Est	Notes
External sources												
Zai WTP	46.7	49.2	54.4	59.1	61.2	68.4	61.8	57.0	57.0	57.0	57.0	Plant capacity: 90 MCM/year
Zara Ma'in WTP	31.2	35.5	36.7	38.2	38.7	38.1	38.1	38.0	38.0	38.0	38.0	Plant capacity: 48 MCM/Year
Khaw TM	7.7	7.0	5.3	4.8	4.8	4.4	2.2					
Wala Wells	5.0	6.0	4.3	4.3	4.3	4.4	2.2					
Lajoun Wells	6.0	3.5	1.9	1.5	0.9	1.8	0.8					
Hisban wells							-	-	-	-	-	
Other external sources							-	-	7.0	-	-	
Total	96.6	101.2	102.6	107.9	109.9	116.6	105.1	95.0	102.0	95.0	95.0	
Disi water												
Disi-Delivered				_			40.3	82.0	86.0	90.0	90.0	
Disi-Miyahuna							40.3	60.0	60.0	60.0	60.0	
Internal Sources	36.9	37.1	37.2	38.9	34.5	38.9	38.6	36.5	39.0	40.0	10.0	Balancing production
Total	133.5	138.3	139.8	146.8	144.4	155.5	184.4	191.5	201.0	195.0	165.0	
Water sales	10.3	8.8	10.8	12.6	12.3	12.6	13.0	-	-	_	-	
Water Supply- Amman	123.2	129.5	129.0	134.2	132.1	142.9	171.4	191.0	201.0	190.0	165.0	
Water Demand- Amman (Including regular NRW)	153.7	154.5	155.2	155.9	156.6	157.3	158.1	158.8	159.5	161.4	163.2	
Excessive NRW							26.0	50.0	50.0	25.0	-	
Total	153.7	154.5	155.2	155.9	156.6	157.3	184.1	208.8	209.5	186.4	163.2	
Difference	(30.5)	(25.0)	(26.2)	(21.7)	(24.5)	[14.4]	(12.7)	(13.3)	(8.5)	3.6	1.8	

Amounts are in MCM

The comparison of the amount of water supply compared to water demand is shown in Figure 14.

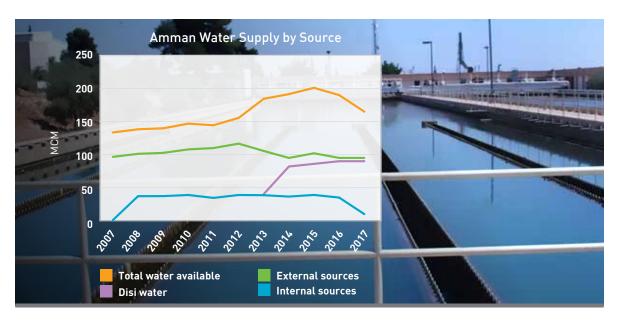
Figure 14



Because of the amount of NRW, resulting from the leakage in in the distribution network, Miyahuna will not be able to meet demand until NRW is reduced. The gap between supply and demand is reduced because of Disi water; therefore Miyahuna will be able to provide better and more frequent service but initially will not be able to provide continuous service.

The water sources will not be reduced until NRW is reduced. It is expected NRW will increase in 2013 and 2014. As the leaks in the system are repaired and the Class B meters are replaced with upgraded meters, NRW will be reduced. With the reduction of NRW, both internal and external sources will be reduced. The water supply available is illustrated in Figure 13.

Figure 13



# **Risks Associated with Improved Water Supply**

With the completion of the Disi pipeline in mid-2013 and the potential for delivery to customers starting in mid-2013, Miyahuna will have for the first time, in decades, improved water delivery. This situation, as NRW is reduced, will allow Miyahuna to potentially provide continuous water service to Amman customers. Miyahuna will need to ensure the water distribution network and the wastewater collection systems are able to handle additional flow. Also, because most customers have roof tanks, the valves on the roof tanks will cause a low flow through the current meters which may not be read by the meters. This situation requires the meters to be changed with a different classification of meters or unmeasured flow reduction valves to be installed.

### **Wastewater Collection**

Wastewater is collected from households and business in Amman. The current coverage is approximately 80% of the water customers.

The amount of wastewater collected averaged 64.5 MCM per year. Currently, Miyahuna operates five small WWTP's:

- Wadi Essier
- Abu Nusseir
- Al-Jeza
- Baqaa
- Fuhais

The wastewater treated in these five plants totals less 3.0 MCM per year.

The Al-Samra WWTP, operated by WAJ under BOT operation treats approximately 62 MCM of Amman's sewerage. Currently, this plant is being expanded to take the additional wastewater collected in the future.

A sixth WWTP plant, South Amman WWTP, is under construction and is expected to become operational in 2016. The contractor will operate this plant for the first year. Miyahuna will commence operation in 2017. The principal wastewater collection point in Amman is the Ain Ghazal collection and Zarqa Pump Stations. The wastewater from these stations is pumped to the Al-Samra WWTP, which is operated by WAJ. Al-Samra treats approximately 85% of the wastewater collected in Amman.

This amount is expected to increase as Disi water is delivered because the amount of wastewater is expected to increase in proportion to the increase of water to meet demand. The additional flow will be directed to the Al-Samra WWTP.

The amount of wastewater collected by year is shown in Table 8.

Table 8: Wastewater Collected

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ain Ghazal PS	53.6	55.8	55.5	56.6	55.8	56.4					
Zarqa PS	6.5	6.5	6.5	6.5	6.5	6.5					
Total- to Al-Sambra	60.1	62.3	62.0	63.1	62.3	62.9	89.8	89.4	94.2	101.6	104.2
Wadi Essier WWTP	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Abu Nusseir WWTP	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Al-Jeza WWTP				0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Baqaa WWTP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fuhais WWTP	-	-	-	-	-	-	-	-	-	-	-
South Amman WWTP										19.0	19.0
Total	62.2	64.5	64.3	65.7	64.8	65.4	65.4	97.5	99.6	101.9	104.3
											L- MOM

In MCM

A graph of the wastewater collected compared to the water supply is shown in Figure 14.

Figure 14







### Introduction

In February 2012, the CEO and Directors met to define Miyahuna's services and develop Miyahuna's strategic objectives and strategic elements for 2013-2017. The process for developing the strategic objectives began with the agreement on the services Miyahuna provides to its customers. Miyahuna's Executive Management Team (EMT), consisting of the CEO and Directors, defined the services provided as follows:

- Water delivery
- Wastewater disposal

# Miyahuna's Strategic Objectives

Once the services had been identified, the Executive Management Team, defined the Strategic Objectives Miyahuna will concentrate on for the 2013-2017 period. These strategic objectives are as follows:

- 1. Deliver water on demand to customers
- 2. Provide wastewater collection and treatment services
- 3. Prepare for improved water supply
- 4. Manage customer relations
- 5. Enhance business operations
- 6. Comply with applicable laws and regulations

# Miyahuna's Strategic Elements

Once the strategic objectives had been agreed by the EMT, they developed strategic elements. Each strategic element is related to a strategic objectives and the strategic element must be measurable. The EMT used the SMART method to define the strategic element goals. SMART goals are defined as:

Specific Measurable Attainable Realistic Timely

Finally, the EMT identified the directorates affected by each strategic element and a coordinating directorate designated to develop an action to achieve each goal. Each coordinating directorate appoints a coordinator who develops the action plan. The coordinators are the liaison and coordinate with the directorates affected by the action plan.

Table 9 provides the strategic objective, strategic elements and responsibilities, targets and goals.

Table 9: Miyahuna Business Plan Strategic Objectives and Elements

Strategic Objective	Strategic Elements	Concerned Directorates	Coordinating Directorate	Target Measurement	Current 31 Dec 2011	5 year Goal 31 Dec 2017
1.0 Deliver water on	1.1 Deliver water to customers	0ps	0ps	Hours of service	33 hours per week	24 hours per day, 7 days per week
demand to customers	1.2 Reduce physical and commercial NRW to 15%	Ops, TS, CS	0ps	% NRW, based on 5 pillars of Miyahuna	34	28% because of Disi water
	1.3 Provide water connections for all	CS, TS	CS	Additional meters-3 days	To be determined	100 % compliance
	requests		CS	Connections- 10 days		100 % compliance
			TS	Connections with extensions → 500 meters-30 days		
2.0 Provide wastewater collection	2.1 Reduce blockages	Ops	0ps	Number of blockages per km, annual	11 per km	8.5 per km
and treatment services	2.2 Reduce illegal inflow (quantity & quality)	CS	CS	% Inflow	No data	To be determined
	2.3 Implement wastewater reuse	Ops, P&Q	Ops	WW effluent disposed	0% reuse	100% reuse
	2.4 Construct wastewater network connections and expansion	CS, TS	TS	Coverage ratio of water customers	80% coverage	90% coverage
3.0 Prepare for improved water supply	3.1 Implement improvements to water network system	Ops, TS	TS	CDM study	Not Applicable	100% implementation
water supply	3.2 Implement improvements to wastewater network system	Ops, TS	TS	CDM study	Not Applicable	100% Implementation
	3.3 Replace current meters with appropriate meters	CS	CS	% of meters replaced	Not Applicable	100% Replacement
	3.4 Implement customer awareness program for improved supply	Com, CS	Com	Communication Plan	Not Applicable	100% Implementation

Table 9: Miyahuna Business Plan Strategic Objectives and Elements

Strategic Objective	Strategic Elements	Concerned Directorates	Coordinating Directorate	Target Measurement	Current 31 Dec 2011	5 year Goal 31 Dec 2017
4.0 Manage customer relations	4.1 Each customer receives a timely accurate invoice	CS	CS	Doorstep billing percentage	94%	100%
retations	4.2 Improve amounts collected	CS	CS	Invoiced amount collected	99%	100+%
	4. 3 Optimize customer satisfaction	All	Com	% customer satisfaction	73%	85%
5.0 Enhance business	5.1 Complete GIS system-water delivery	IT, Ops, TS, CS	IT	% customers listed with CS	65%-75%	100%
operations	5.2 Complete GIS System-Wastewater Collection	IT, Ops, TS, CS	IT	% of customers listed with CS	50%	100%
	5.3 Reduce energy usage	All	P & Q	Kwh/m³	To be determined	5 % reduction
	5.4 Implement supply chain improvements	All	Fin	Reduce time to procure goods and services	To be determined	10 % reduction
				Quality of goods and services	To be determined	100% compliance with specifications
	5.5 Implement a comprehensive ERP	IT	IT	ERP Plan	To be determined	100% Implementation of plan
	5.6 Implement SCADA, Phase 2	Ops	0ps	Primary and secondary water network controlled	To be determined	100% Implementation
	5.7 Purchase Headquarters Building	HR	HR, TS & Fin	Headquarters staff relocated	Not applicable	Relocation of Miyahuna's staff
	5.8 Construct Zai Warehouse	Fin	Fin, P&Q	Construct warehouse	Not applicable	Warehouse is utilized
6.0 Comply with applicable laws and	*6.1 Keep water and wastewater quality within Jordanian standards	P&Q, Ops	P&Q	Water and wastewater quality standards	99+ % compliance	Water - 99+ % compliance Wastewater – 95% compliance
regulations	*6.2 Review Assignment Agreement annually for potential revisions	All	Legal	Potential revisions	Not Applicable	Annual review with WAJ
	6.3 Ensure a safe environment for Miyahuna employees	All	HR	Reduction of on-the job injury reports	To be determined	5% annual reduction from previous year
	6.4 Comply with employment laws	HR	HR	To be determined	To be determined	100% Compliance

Key: Ops - Operations, TS - Technical Services, CS - Customer Service, P&Q - Production and Quality, Comm - Communication, Fin - Finance, HR - Human Resources

<sup>\* 6.1</sup> Keep water quality within Jordanian standards; and 6.2 Keep waste water quality within Jordanian standards have been joined in this table as 6.1, and are listed separately as 6.1 and 6.1 in action plans and cost estimates

# **Action Plan Financial Summary**

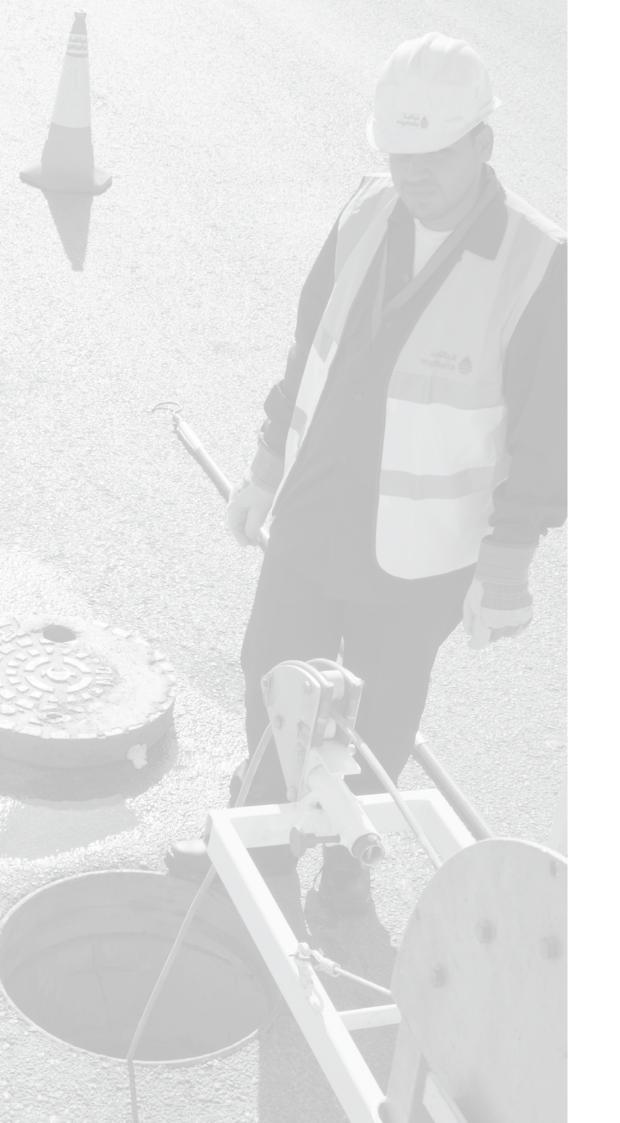
The project manager for each action plan submitted the resources needed to implement to specific plan. The project manager identified an estimate of resources, including:

- Staffing
- Material
- Equipment
- Other resources

The staffing identified the individual needed by position, pay level, the number of staff needed. For the material and equipment requested, the cost was either provided by the coordinator or provided by the Purchasing Department. The cost of other resources was identified by the coordinator. A summary of the financial impact is shown in Table 10.

	2013		2014		2015	5	2016	91	2017	7	Total	_
	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
1.0 Deliver water on demand to customers												
1.1 Deliver water to customers	57,540	36,000	61,391		65,502	ı	688'69		74,571	ı	328,893	36,000
1.2 Reduce physical and commercial NRW to 15%	242,200	92,500	257,040		121,445		128,820			,	749,506	92,500
1.3 Provide water connections for all requests	ı	500,000	,	500,000	,	500,000	,	500,000		500,000	,	2,500,000
2.0 Provide wastewater collection and treatment services												
2.1 Reduce blockages	078'67	108,000	81,670	300,000	86,255	ı	91,002		96,023		7404,790	408,000
2.2 Reduce illegal inflow (quantity & quality)	48,000	11,600	48,000		78,000					,	144,000	11,600
2.3 Implement wastewater reuse	•	•	31,290	80,000	32,741	36,667	34,264	36,667	35,863	36,667	134,158	190,000
2.4 Construct wastewater network connections and expansion	,	5,000,000		5,200,000	,	5,200,000		5,200,000	,	5,200,000		25,800,000
3.0 Prepare for continuous supply												
3.1 Implement improvements to water network system	,	11,000,000	,	14,300,000	'	5,500,000	,		,		,	30,800,000
3.2 Implement improvements to wastewater network system		14,000,000		11,000,000	,	9,600,000	ı		ı	ı	1	31,600,000
3.3 Replace current meters with appropriate meters		12,500,000	'	25,000,000		12,500,000				,		50,000,000
3.4 Implement customer awareness program for continuous service	336,600	,	83,600	,	,	,	ı		,	ı	420,200	
4.0 Manage customer relations												
4.1 Each customer receives a timely accurate invoice		•					,			·		
4.2 Improve amounts collected	72,000	2,800	72,000		72,000	ı					216,000	2,800
4.3 Optimize customer satisfaction	14,000	•	14,000		14,000		14,000	,	14,000		70,000	
5.0 Enhance business operations												
5.1 Complete GIS system-water delivery	37,870	91,100	40,501		43,316		46,331	-	49,558		217,575	91,100
	46,200	91,100	49,264	'	52,534		56,026		59,753	,	263,777	91,100
5.3 Reduce energy usage		•			•	1	,			,		
5.4 Implement supply chain improvements		40,000	,	'	,		,			,	,	40,000
5.5 Implement a comprehensive ERP	82,320	'	906'88		96,018	ı	103,699		111,995	,	482,939	,
5.6 Implement SCADA, Phase 2	16,170	40,050	19,950	4,932,500	13,300		14,231	,	8,120	ı	71,771	4,972,550
5.7 Purchase Headquaters Building		1,500,000	'	2,400,000	'	ı	,			,	'	3,900,000
5.8 Construct Zai Warehouse		•		200'000	,	1,000,000	,	1,000,000		,		2,500,000
6.0 Comply with applicable laws and regulations												
6.1 Keep water quality within Jordanian standards	30,000	27,000	30,000		30,000		30,000		30,000		150,000	27,000
6.1 Keep wastewater quality within Jordanian standards	4,500	,	4,500	,	4,500	ı	4,500		4,500	ı	22,500	,
6.2 Review Assignment Agreement annually for potential revisions	,	'	'	,	'	,	ı	,	,	ı	,	
6.3 Ensure a safe environment for Miyahuna employees	70,000	76,800	75,000	17,500	219,975	17,500	188,100	147,500	183,100	17,500	736,175	276,800
6.4 Comply with employment laws	1	•	33,000	009'9	33,000		33,000	,	33,000	,	132,000	9,600
Total	1,107,240	45,116,950	990,112	64,236,600	932,587 31	31,354,167	813,862	6,884,167	700,483	5,754,167	787'775'7	153,346,050

Note: In April 2013, Strategic elments for Water and Wastewater quality were combined into one element





### Introduction

Miyahuna uses its OPEX and CAPEX Budgets to project its financial situation rather than the traditional finance statements, which use the balance sheet, statement of comprehensive income and statement of cash flows. The OPEX and CAPEX Budget show the sources and uses of funds and are not intended to show Miyahuna financial activities on an accrual basis.

The OPEX Budget details the operating sources and uses of funds. Operating revenues are initially recognized in the OPEX and operating expenditures are charged against operating revenue. Any excess of operating revenues over operating expenditures is transferred to the CAPEX Budget for use in capital expenditures.

The CAPEX Budget is used for the expenditure on capital items. The items included in the CAPEX Budget are tangible items which have a useful life greater than one year. The sources of funds for the CAPEX are comprised of the following:

- Excess of operating revenues over operating expenses
- Contributions of WAJ
- Donor grants or loans

The financial projections are calculated for the five-years 2013-2017 and are based on historical trends for the individual revenue and expenditure categories. For 2008-2011, actual expenditures are used. For 2012 and 2013 projections, the Miyahuna's OPEX and CAPEX Budgets are used. For years 2014-2017, the projections prepared by Miyahuna's Finance Directorate are used.

### Revenues

Revenues are segregated into three areas, as follows:

- Tariff-based Revenues (85% of total revenue)
- Billed revenue
- New connection fees
- Other water revenues
- Tax-based revenue (14% of total revenue)
- 3% Property tax revenue
- Other revenue (1% of total revenue)

### **Billed Revenues**

The water billed revenues are from the sale of water services to either to subscribers (customers) or to other governorates. For Miyahuna customers, the water services provided are:

- Water production
- Water delivery
- Wastewater collection
- Wastewater treatment

The principal water services fees are as follows:

- Water fees (including the fixed fee portion of the water billing)
- Sewerage fees
- Fixed fee to cover administrative costs

The tariff is established by the Cabinet of Ministers. The tariff rates are applied to individual meter consumption. Individuals are billed quarterly. Large customers are billed monthly. The water and wastewater tariffs are shown in Table 3. No future tariff increases are projected for the period 2013-2017.

### **New Connections Revenue**

In addition to the fees for providing water delivery, Miyahuna charges a connection fee for new water service and new wastewater service connections. Miyahuna provides the design services for the connections using in-house staff and contracts with independent contractors to install the physical connection between the network and the property.

The current tariff for water charges are shown in the Revenues Sources Section.

### Annual 3% Tax from GAM

Miyahuna receives from GAM the taxes collected for the Annual Rental Value which is currently 3% Tax collected within the Miyahuna service area.

### **Total Projected Revenue**

The billed revenue projections for 2012-2015 are prepared jointly by Customer Services and Finance based on the current tariff, estimated billed quantities, and estimated NRW. For years 2016 and 2017 the revenue line items are increased by 5% each year based on the 2015 projections. The revenues are shown in Figure 15.

Figure 15 - Revenues



The projected revenues are shown in Table 11.

### Revenues - Risks

If the current Class B meters are not replaced, there will a material revenue loss. Although the amount of this revenue loss is difficult to quantify, the potential loss is estimated at 20 million JD per year for the years 2014-2017. This potential revenue loss is not shown in the revenue estimates.

# **OPEX Budget**

The operating budget (OPEX) format is cash based and is based on estimates of operating expenditures. The non-cash expenses which are not show in the OPEX Budget are:

- Depreciation
- Right to use water authority's infrastructure

Each Directorate estimate the needed operating needs for the period 2013-2017 with the exception of items based on water quantity. These items are purchase of water and sewerage transferred. Operational expenditures are for operation and maintenance related to the water production distribution and wastewater collection activities. The major operating expenditures are:

- Cost of water
- Electricity
- Sewage treatment
- Payroll (Wages, salaries & related expenses)

The Ministry of Water and Irrigation has not established a transfer price and therefore the cost of Disi water to be delivered to Miyahuna is not known. The projected cost of Disi water is 0.83 JD per m³. It is not yet known if there will be any Government subsidy. Miyahuna has prepared the cost of Disi water using an estimate of 0.300 JD/m³ as the transfer price.

The cost of electricity expenditure to Miyahuna comprises nearly 50% of the total expenditures. This is because the water sources are located in the Jordan Valley and water has to be pumped to Amman's elevation.

Miyahuna operates several small wastewater treatment plants. However, over 90% of the wastewater treatment is provided at the Al-Samra Wastewater Treatment Plant which Miyahuna pays for its services. This plant is operated by a BOT contractor to WAJ.

Miyahuna's wages and salaries and related fringe benefits equal approximately 17% of total expenditures. This percentage is projected to decrease in future years as Miyahuna becomes more efficient.

Construction revenue and expenses are not shown in the OPEX Budget as these items are capital related and are included in the CAPEX Budget.

The OPEX Budget financial projection for Miyahuna, without a tariff increase or government subsidy, is shown in Table 14. The operating expenditures include the electricity tariff increase of 22% enacted in June 2012.

Table 11

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	Actual	Actual	Actual	Actual	Budget	Budget	Est	Est	Est	Est
Operating Revenues										
Billings										
Water	43.4	46.9	45.8	51.6	55.5	58.5	53.5	56.1	58.9	61.9
Sewerage	11.5	12.1	12.4	14.1	14.7	19.9	17.2	18.1	19.0	19.9
Total-Billings	54.8	59.0	58.2	65.7	70.3	78.4	70.7	74.2	77.9	81.8
Water Subscription fees	6.0	5.0	5.0	5.8	5.8	6.5	6.5	6.8	7.2	7.5
Sewerage Connection fees	6.1	5.3	5.5	6.3	6.1	6.2	6.8	7.2	7.5	7.9
3% Rental tax	9.3	9.8	10.4	12.0	13.5	14.0	14.7	15.4	16.2	17.0
Other	1.3	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2
Revenues	77.5	79.5	79.5	90.2	96.0	105.3	98.9	103.8	109.0	114.5
Tariff increase/subsidy Disi water						-	-	-	-	-
Total-Operating Revenues	77.5	79.5	79.5	90.2	96.0	105.3	98.9	103.8	109.0	114.5
Operating Expenditures										
Purchase of Water	3.8	2.6	2.2	2.4	3.4	6.4	16.7	17.6	18.4	19.4
Operations & Maintenance										
Operations										
Electricity	27.5	25.8	28.2	30.3	37.8	44.0	38.0	39.9	41.9	44.0
Generator Fuel	-	-	-	-	-	-	-	-	-	-
Chemicals	2.3	2.1	2.6	2.9	2.7	3.6	2.5	2.7	2.8	2.9
Water Treatment-Sub Contractor	0.7	0.6	0.6	1.2	1.1	1.1	1.2	1.2	1.3	1.3
Sludge transferred	-	-	-	-	0.1	0.1	0.1	0.1	0.1	0.1
Total-Operating	30.5	28.5	31.5	34.4	41.6	48.8	41.8	43.9	46.1	48.4
Sewerage Transferred	9.4	9.6	12.2	10.1	11.4	13.0	14.9	15.6	16.4	17.2
Maintenance	8.8	8.4	3.9	5.5	5.8	6.9	6.0	6.3	6.6	7.1
Total - operation & maintenance	48.7	46.6	47.6	50.0	58.8	68.7	62.7	65.8	69.1	72.7
Wages, salaries & related costs	9.8	12.2	12.3	14.1	16.0	18.1	16.4	17.2	18.1	19.0
Other expenditures	5.2	4.6	5.2	4.8	5.5	5.9	6.5	7.2	7.8	8.5
Total - operating expenditures	67.5	66.0	67.3	71.4	83.6	99.2	102.3	107.8	113.4	119.5
Excess of operating revenues over operating expenditures	10.1	13.4	12.2	18.8	12.4	6.2	(3.4)	(4.0)	(4.4)	(5.1)
Amount available for action plans and CAPEX						6.2	-	-	-	-

### OPEX Budget - Financial Risk

The OPEX shows the excess of revenue over expenditures shows a deficit when Disi water is delivered. Miyahuna assumes that the cost of Disi water to Miyahuna is 0.83 JD per m³. It is projected Miyahuna will use 40 MCM of Disi water in 2013 and starting in 2014 Miyahuna will be allocated 60 MCM of Disi water per year. The cost of service for current tariff rate was not calculated for the cost of Disi water. Miyahuna will need either a tariff increase or a subsidy when it begins to use Disi water.

### **CAPEX Budget**

Each Directorate prepares their projected Capital Expenditure (CAPEX) needs for the years 2013-2017. As the result of electricity increases in past years without a corresponding increase in water tariffs, has reduced the amount Miyahuna can contribute to CAPEX to zero. WAJ is supporting Miyahuna in Amman III & IV projects funded by KfW. Miyahuna provides in-kind services to meet cofunding requirements.

Miyahuna needs an additional 162.7 million JD for CAPEX infrastructure needs. The CAPEX needs are shown in Table 12.

		•			
	2013	2014	2015	2016	2017
Carry forward from prior year	3.2	(9.1)	(71.4)	(115.1)	(141.8)
Source of Funds					
Amount available from OPEX	6.2				
Asset owner responsibility					
Donor contributions					
Amount available for Action Plans and CAPEX	9.3	(9.1)	(71.4)	(115.1)	(141.8)
Use of funds					
CAPEX	18.4	62.3	43.7	26.7	20.9
Carry forward	(9.1)	(71.4)	(115.1)	(141.8)	(162.7)

Table 12-CAPEX: CAPEX 2012-2017, Based on 2013 Budget

### **CAPEX - Financial Risk**

Because WAJ is the asset owner of the plants and networks Miyahuna operates, WAJ is responsible for the investment and replace of major capital items. Because WAJ is experiencing severe fiscal stress and the Government of Jordan has not provided capital funds for the last three years, WAJ is unable to contribute to the investment is Miyahuna capital needs. This requires Miyahuna and WAJ to solicit donor funding for capital improvement funding.

# **Priorities for funding projects**

The delivery of Disi water provides Miyahuna the opportunity to provide its customers in Amman with improved service and relieves Miyahuna of the summer shortage of source water. However, Disi water is very expensive water and without government action in either raising the tariff or subsidizing the cost of Disi water, Miyahuna will be put in severe financial stress.

With the limited funds available for CAPEX, Miyahuna must prioritize the actions plans which will be funded. In addition to prioritizing the projects selected, Miyahuna needs to analyze each action plan to determine if the cost can be reduced by taking the following actions:

- Determine if the scope of the project can be changed or reduced
- If the project can be delayed

In selecting the projects for funding, Miyahuna has set the following priorities as shown in Table 13:

Table 13: Miyahuna's Priorities

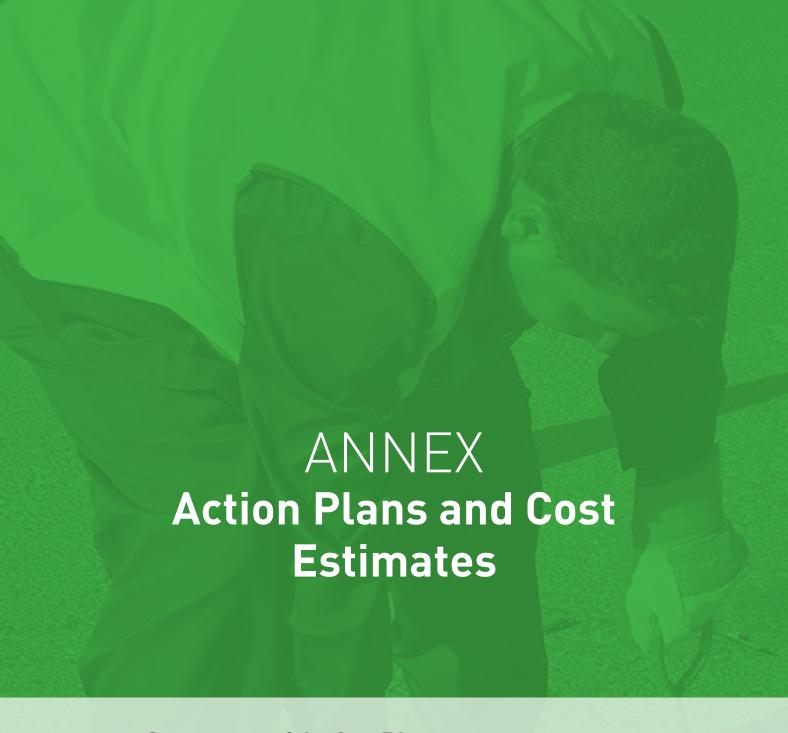
Priority	Action
1	Revenue generating
2	Preparation for improved water supply
3	Operations
4	Enhance business operations
5	Improve customer relations
6	Legal mandates

Using the priorities the Action Plans can be grouped into priority groups. Table 13 shows the priority groups and the cost of each action plan.

Miyahuna is developing an asset management system. As part of the asset management system Miyahuna plans to strengthen its priority setting process. The priority setting system will be enhanced with the implementation of the asset management system.

	Cost Proposed	2013	<u> </u>	2014	7	2015	D.	2016	9	2017	1	ř	Total
	covered fron OPEX Projects	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Miyahuna Responsibility													
No cost													
6.2 Review Assignment Agreement annually for potential revisions	×	•											
Revenue generating-Priority 1													
4.1 Each customer receives a timely accurate invoice	×	•	•				•						•
4.2 Improve amounts collected	×	72,000	2,800	72,000		72,000		•	•	•	•	216,000	2,800
Preparation for continuous service-Priority 1													
3.4 Implement customer awareness program for continuous service		336,600	•	83,600		•				•		420,200	<b>-</b>
Operations-Priority 2													
1.1 Deliver water to customers		57,540	36,000	61,391		65,502		688'69	٠	74,571	,	328,893	36,000
1.2 Reduce physical and commercial NRW to 15%		242,200	92,500	257,040		121,445		128,820	•			749,506	92,500
1.3 Provide water connections for all requests			200,000	•	500,000		200,000		200,000		500,000		2,500,000
2.1 Reduce blockages		79,840	108,000	81,670	300,000	86,255		91,002	•	96,023		404,790	408,000
2.2 Reduce illegal inflow (quantity & quality)		48,000	11,600	48,000		48,000						144,000	11,600
2.3 Implement wastewater reuse			1	31,290	80,000	32,741	36,667	34,264	36,667	35,863	36,667	134,158	190,000
2.4 Construct wastewater network connections and expansion		•	5,000,000		5,200,000		5,200,000		5,200,000		5,200,000		25,800,000
5.1 Complete GIS system-water delivery		37,870	91,100	40,501		43,316		46,331		49,558		217,575	91,100
5.2 Complete GIS System-Wastewater Collection		46,200	91,100	49,264		52,534		56,026	•	59,753		263,777	91,100
5.3 Reduce energy usage						•			•				1
5.6 Implement SCADA, Phase 2		16,170	40,050	19,950	4,932,500	13,300		14,231		8,120		71,771	4,972,550
6.1 Keep water quality within Jordanian standards	×	30,000	27,000	30,000		30,000		30,000		30,000		150,000	27,000
6.1 Keep wastewater quality within Jordanian standards	×	4,500	•	4,500	٠	4,500		4,500	•	4,500	•	22,500	•
Enhance business operations-Priority 3													
5.4 Implement supply chain improvements	×	•	40,000	٠	٠	•		٠	•	•	•	٠	40,000
5.5 Implement a comprehensive ERP		82,320	1	88,906	٠	96,018	•	103,699	•	111,995	•	482,939	•
5.7 Purchase Headquarters Building		•	1,500,000	•	2,400,000	•	•	٠	•	•	•	٠	3,900,000
5.8 Construct Zai Warehouse		٠	٠		500,000	٠	1,000,000	٠	1,000,000	٠		٠	2,500,000
Improve Customer relations-Priority 4													
4.3 Optimize customer satisfaction		14,000	•	14,000		14,000		14,000		14,000		70,000	•
Legal Mandates-Priority 5													
6.3 Ensure a safe environment for Miyahuna employees		70,000	76,800	75,000	17,500	219,975	17,500	188,100	147,500	183,100	17,500	736,175	276,800
6.4 Comply with employment laws			•	33,000	009'9	33,000	•	33,000	•	33,000	•	132,000	009'9
Total		1,107,240	7,616,950	990,112	13,936,600	932,587	6,754,167	813,862	6,884,167	700,483	5,754,167	4,544,284	40,946,050
WAJ Responsibility													
3.1 Implement improvements to water network system		•	11,000,000	•	14,300,000	•	5,500,000	•	•		•		30,800,000
3.2 Implement improvements to wastewater network system		•	14,000,000	•	11,000,000	•	6,600,000	•	•	•	•	•	31,600,000
3.3 Replace current meters with appropriate meters		•	12,500,000	,	25,000,000	•	12,500,000	•		•	•	1	50,000,000
Total		'	37,500,000	•	50,300,000		24,600,000						112,400,000
Total		1,107,240 45,116,950	5,116,950	990,112	64,236,600	932,587	31,354,167	813,862	6,884,167	700,483	5,754,167	4,544,284	153,346,050
Note: In April 2013, Strategic elements for water and wastewater quality were combined into	r quality were combined	into one element	nent										

Table 14: Action Plans Ranked by Priority



# **Summary of Action Plans**

This section contains the action plans developed by the individual coordinators. The action plans contain a description of the plan and the activities associated with each action plan. Also included are estimates and timing of the resources needed and a projection of the costs.

# **ACTION PLANS COST SUMMARY**

	2013	13	2014	7	2015	15	2016	91	2017	17	100	Total
	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
1.0 Deliver water on demand to customers												
1.1 Deliver water to customers	57,540	36,000	61,391	ı	65,502	,	688'69	,	74,571	,	328,893	36,000
1.2 Reduce physical and commercial NRW to 15%	242,200	92,500	257,040		121,445		128,820				749,506	92,500
1.3 Provide water connections for all requests		200'000		200'000		200'000		200'000		200,000		2,500,000
2.0 Provide wastewater collection and treatment services												
2.1 Reduce blockages	74,840	108,000	81,670	300,000	86,255		91,002		96,023		404,790	408,000
2.2 Reduce illegal inflow (quantity & quality)	48,000	11,600	48,000		48,000						144,000	11,600
2.3 Implement wastewater reuse	-	-	31,290	80,000	32,741	36,667	34,264	36,667	35,863	36,667	134,158	190,000
2.4 Construct wastewater network connections and expansion	,	5,000,000	,	5,200,000	ı	5,200,000	,	5,200,000	,	5,200,000	,	25,800,000
3.0 Prepare for continuous supply												
3.1 Implement improvements to water network system	,	11,000,000	,	14,300,000	ı	5,500,000	,	ı	,	,	,	30,800,000
3.2 Implement improvements to wastewater network system	,	14,000,000	,	11,000,000	ı	000'009'9	,	ı	,	ı	,	31,600,000
3.3 Replace current meters with appropriate meters		12,500,000		25,000,000		12,500,000						50,000,000
$_{ m 3.4}$ Implement customer awareness program for continuous service	336,600	,	83,600		ı	-				,	420,200	,
4.0 Manage customer relations												
4.1 Each customer receives a timely accurate invoice	•	•										,
4.2 Improve amounts collected	72,000	2,800	72,000		72,000			-		-	216,000	2,800
4.3 Optimize customer satisfaction	14,000		14,000		14,000		14,000		14,000		70,000	
5.0 Enhance business operations												
5.1 Complete GIS system-water delivery	37,870	91,100	40,501	-	43,316	-	46,331	-	49,558	-	217,575	91,100
5.2 Complete GIS System-Wastewater Collection	46,200	91,100	49,264		52,534	-	56,026	-	59,753	-	263,777	91,100
5.3 Reduce energy usage	1	•	'	,	'	,	,		ı	-		
5.4 Implement supply chain improvements	-	40,000				-		-	,	-	,	40,000
5.5 Implement a comprehensive ERP	82,320	1	906'88		96,018		103,699		111,995		482,939	
5.6 Implement SCADA, Phase 2	16,170	40,050	19,950	4,932,500	13,300		14,231		8,120		71,771	4,972,550
5.7 Purchase Headquaters Building	-	1,500,000		2,400,000	-	-		-		-	•	3,900,000
5.8 Construct Zai Warehouse	•			200'000		1,000,000		1,000,000			•	2,500,000
6.0 Comply with applicable laws and regulations												
6.1 Keep water quality within Jordanian standards	30,000	27,000	30,000		30,000	-	30,000	-	30,000	-	150,000	27,000
6.1 Keep wastewater quality within Jordanian standards	7,500	ı	4,500	ı	7,500		7,500	ı	7,500	ı	22,500	,
6.2 Review Assignment Agreement annually for potential revisions	1	1	I	ı	ı				ı	ı	ı	,
6.3 Ensure a safe environment for Miyahuna employees	70,000	76,800	75,000	17,500	219,975	17,500	188,100	147,500	183,100	17,500	736,175	276,800
6.4 Comply with employment laws	•	•	33,000	009'9	33,000	,	33,000	'	33,000	-	132,000	9,600
Total	1,107,240	45,116,950	990,112	64,236,600	932,587	31,354,167	813,862	6,884,167	700,483	5,754,167	4,544,284	153,346,050

1,107,240 49,116,750 770,112 64,236,600 932,387 31,334,167 813,862 6,884,167 700,483 5,794,167 4,544,284 133,346,090
Note: In April 2013, Strategic elments for Water and Wastewater quality were combined into one element

Strategic Element: 1.1 Deliver water to custo	mers		Strategic Objective: 1.0	Deliver water on Demand to Customers
Coordinating Directorate: Operations	Concerned Directo	rate	s: Operations	Coordinator: Nadia Suleiman
Target measurement: Hours of service	Current: Average	33 ho	urs per week	<b>5-year Goal:</b> 24 hours per day, 7 days per week
	his shift will be done t ecommendations cor	hrou cern	igh surveys followed up t ing the changes that will	
Activity 1	Existing	x	New	
Adopt correction measures such as pressure conducting a survey to check the status of the	3			, ,
Activity 2	Existing	x	New	
Reviewing WIP final report recommendations	concerning the chang	es th	nat will enable Amman w	rater distribution network to receive Disi water.
Activity 3	Existing	x	New	
Managing the shortcomings of C15 especially	that are related to dis	tribu	ıtion system.	
Notes: Maintenance of water pumping stations is an a	activity under the umb	rella	of Production & Quality	Directorate

Maintenance of the water network is an activity under the umbrella of reducing NRW strategic element

### Strategic element: 1.1 Deliver water to customers

Strategic objective: 1.0-Deliver water on demand to customers

Coordinating Directorate: Operations Coordinator: Nadia Sulieman

Plan description

 $Miyahuna\ will\ prepare\ the\ water\ network\ to\ receive\ Disi\ water\ and\ consequently\ shift\ the\ distribution\ regime\ of\ Amman\ to\ continuous$ supply through surveys that will be followed up by correction measures in addition to reviewing WIP final report recommendations concerning the changes that will enable Amman water distribution network to receive Disi water. Another issue is the shortcomings of C15, especially that are related to distribution system.

	New/	20	13	20	14	20	15	20	16	20	17	То	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Prepare network to receive Disi water	New												
Labor		22,820	-	24,322	-	25,924	-	27,632	-	29,452	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	36,000	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		22,820	36,000	24,322	-	25,924	-	27,632	-	29,452	-	130,150	36,000
Activity 2- Implement WIP Report recommendations	New												
Labor		17,360	-	18,535	-	19,789	-	21,129	-	22,559	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		17,360	-	18,535	-	19,789	-	21,129	-	22,559	-	99,371	-
Activity 3-Correct C15 shortcommings	New												
Labor		17,360	-	18,535	-	19,789	-	21,129	-	22,559	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		17,360	-	18,535	-	19,789	-	21,129	-	22,559	-	99,371	-
Total		57,540	36,000	61,391	-	65,502	-	69,889	-	74,571	-	328,893	36,000

### Strategic element: 1.2 Reduce physical and commercial NRW to 15% Strategic objective: 1.0 Deliver water on demand to customers Coordinating Directorate: Operations Concerned Directorates: Ops TS, CS Coordinator: Abdullah El Jarrah Target measurement: % NRW, based on 5 Current: Average 32% 5-year Goal: 28% because of Disi water pillars Summary Description of Plan: One of Miyahuna's major challenges is to reduce the relatively high percentage of global NRW (32%), a figure which is expected to dramatically increase through receiving of Disi water in mid-2013. In order to overcome this challenge, Miyahuna shall work on five pillars to reduce and control NRW. Each of those pillars should be treated as separate project and form a comprehensive program. Existing New Complete Amman Capital Investment Project (C15). TS **Activity 2** Existing New Prepare and activate District Management Establishment Management System by the following main activities: - Isolate all the borders between District Zone (DZ) and Sub DZ. - Complete district establishment. - Verify and re-mediate all the bulk meters in the distribution zone and district. - Verify and re-mediate All the PRV located in districts. - Complete Amman SCADA by connecting all the Meters and PRV to start pressure and flow management and control system **Activity 3** x Existing New Complete Amman House Connection replacement projects. TS + Ops Activity 4 Existing New Upgrade and replace all Amman customers meter (focus on the big customers). CS Eliminate cost duplication **Activity 5** Existing New

Out Sourcing the Deep South. TS + CS + Ops

Notes:

### Strategic Element:1.2-Reduce physical and commercial NRW to 15%

Strategic Objective:1.0-Deliver water on demand to customers

Coordinating Directorate: Operations

Coordinator: Abdullah Al Jerrah

Plan description

To reduce the relatively high percentage of global NRW (32%) and to this figure is expected to dramatically increase when Disi water arrives in mid-2013. To over come this challenge Miyahuna will work on the five Pillars to reduce and control NRW. Each of these pillars should be treated as individual projects, which forma comprehensive program.

	New/ 2013 2014 2015 20								16		)17	Total	
	Existing	OPEX	CAPEX	OPEX	CAPEX		CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Complete		OFEX	CAPEX	OFEX	CAPLA	OFEX	CAFLA	OFEX	CAFEA	OFLA	CAPEX	OFEX	CAPLA
Amman CIP	Existing												
Labor		67,340	-	71,457	-	-	_	-	_	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	92,500	-	-	-		-		-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		67,340	92,500	71,457	-	-	-	-	-	-	-	138,797	92,500
Activity 2- Prepare & Activate DMA Mnagement System	New												
Labor		107,940	-	114,493	-	121,445	-	128,820	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		107,940	-	114,493	-	121,445	-	128,820	-	-	-	472,699	-
Activity 3-Complete Amman House Connection replacement projejcts	Existing												
Labor		33,460	-	35,545	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		33,460	-	35,545	-	-	-	-	-	-	-	69,005	-
Activity 4-Upgrade and replace all Amman customer meters	New												
Labor		33,460	-	35,545	-	-	_	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	_	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 4		33,460	-	35,545	-	-	-	-	-	-	-	69,005	-
Activity 5-Out- sourcing the Deep South	New												
Labor		-	-	-	-	-	-	-	-		-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 5		-	-	-	-	-	-	-	-	-	-	-	-
Total		242,200	92,500	257,040	-	121,445	-	128,820	-	-	-	749,506	92,500

Strategic Element: 1.3 Provide water connecti	ons for all requests	
Strategic Objective: 1.0 Deliver water on dema	and to customers	
<b>Coordinating Directorate:</b> Customer Service & Technical Services	Concerned Directora	tes: TS, CS Coordinator: Laila Abo Rabee
Target measurement: Additional meters-3 days (Customer Services) Connections-10 days (Customer Services) Connections with extensions →500 meters-30 days (Technical Services)	Current: To be determined To be determined To be determined	<b>5-year Goal:</b> 100% Compliance 100% Compliance 100% Compliance
<b>Summary Description of Plan:</b> Study, design an need water service and network lengths for each		rk extension with different diameters to serve new residential areas that m
Activity 1 X	Existing	New
Study, design, list, and prioritize new connection cost by lot	n applications accordin	g to length of network and number of house connection suggested and
Activity 2 X	Existing	New
Prepare tender document and award contract	of approximately 500 ,0	000 JD or 10 Km per year of different diameter (from 63 mm to 200 mm)
Activity 3 X	Existing	New
Supervise the contract after award through sup	pervision department /	consultancy service external
Notes: In the table below, Activity No. 1 only inc	cludes the existing appl	ication and does not cover future, new applications

### Strategic Element: 1.3 Provide water connections for all requests

Strategic Objective: 1.0-Deliver water on demand to customers

Coordinating Directorate: Technical Services Coordinator: Laila Abo Rabee

Plan description

Study, Design, and execute water network extensions with different diameters to serve new residential areas which need water service and network lengths of each application over 500 meters.

	New/	2	D13	20	014	2	D15	2	016	20	17	Т	otal
	Existing	OPEX	CAPEX										
Activity 1-Prepare network to receive Disi water	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- Implement WIP Report recommendations	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	500,000	-	500,000	-	500,000	-	500,000	-	500,000		
Total-Activity 2		-	500,000	-	500,000	-	500,000	-	500,000	-	500,000	-	2,500,000
Activity 3-Correct C15 shortcommings	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		-	500,000	-	500,000	-	500,000	-	500,000	-	500,000	-	2,500,000

#### Strategic Element: 2.1 Reduce blockages Strategic Objective: 2.0 Provide wastewater collection & treatment services Coordinating Directorate: Operations Concerned Directorates: Ops Coordinator: Hafez Battah Target measurement: Number of 5-year Goal: 8.5 per km Current: Average: 11 per km blockages per km, annually

Summary Description of Plan: To reduce blockages, Miyahuna should adopt the following program:

- Implement sewer inspection program
- Implement inflow reduction program
- Implement fat, oil & grease (FOG) reduction program to sewers
- Establish an effective sewer preventive maintenance program

**Activity 1** Existing X New

- Implement sewer inspection program
- To define existing problems in sewer
- To allocate problematic location
- To define sources of misuse of the sewer networks

**Activity 2** Existing New

- Implement Inflow reduction program
- An important cause of the sewer blockages is the roof & yards connection of illegal storm water connections to sewer which causes blockage & back flows

Activity 3 **Existing** New X

- Implement fat, oil & grease (FOG) reduction program to sewers
- This is main cause of blockage since the FOG presence in sewers causes the reduction of sewer capacity & the accumulation of fat & grease will cause blockages

**Activity 4** Existing New

- Establish an effective sewer preventive maintenance program
- To solve blockages before it occurs in problematic locations defined in sewer inspection program
- Define the proper needed tools & equipment to solve effectively the causes of sewer blockages
- Rehabilitation of existing machinery & equipment
- Purchase new needed machinery & equipment
- Sewer usage awareness programs

Notes:

### Strategic Element: 2.1 Reduce blockages

### Strategic Objective: 2.0 Provide wastewater collection & treatment services

Coordinating Directorate: Operations Coordinator: Hafez Battah

To reduce blockages, Miyahuna should adopt the following program

• Implement sewer inspection program

Plan description

• Implement Inflow reduction program

• Implement fat, oil & grease (FOG) reduction program to sewers

• Establish an effective sewer preventive maintenance program

	New/		013		014		15	20	16	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Implement sewer inspection program	New												
Labor		15,680	-	16,498	-	17,359	-	18,268	-	19,225	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	36,000	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		15,680	36,000	16,498	-	17,359	-	18,268	-	19,225	-	87,030	36,000
Activity 2- Implement Inflow reduction program	New												
Labor		15,680	-	16,498	-	17,460	-	18,375	-	19,338	-	-	-
Materials		-	-	-	-	-	-	-	-	-	-	-	-
Equipment		-	36,000	-	-	-	-	-	-	-	-	-	-
Other		-	-	-	-	-	-	-	-	-	-	-	-
Total-Activity 2		15,680	36,000	16,498	-	17,460	-	18,375	-	19,338	-	87,351	36,000
Activity 3-Implement fat, oil & grease (FOG) reduction program to sewers	New												
Labor		18,480	-	19,555	-	20,697	-	21,909	-	23,197	-		-
Materials		-	-	-	-	-	-	-	-	-	-	-	-
Equipment		-	36,000	-	-	-	-	-	-	-	-	-	-
Other		-	-	-	-	-	-	-	-	-	-	-	-
Total-Activity 3		18,480	36,000	19,555	-	20,697	-	21,909	-	23,197	-	103,839	36,000
Activity 4-Establish an effective sewer preventive maintenance program	New												
Labor		-	-	29,120	-	30,738	-	32,450	-	34,262	-	-	-
Materials		-	-	-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	300,000	-	-	-	-	-	-	-	-
Other		-	-	-	-	-	-	-	_	-	-	-	-
Total-Activity 4		-	-	29,120	300,000	30,738	-	32,450	-	34,262	-	126,571	300,000
Total		49,840	108,000	81,670	300,000	86,255	-	91,002	-	96,023	-	404,790	408,000

# Strategic Element: 2.2 Reduce illegal inflow (quantity and quality) Strategic Objective: 2.0 Provide wastewater collection & treatment services Coordinating Directorate: Customer Services Concerned Directorates: CS Coordinator: Amjad Lubbadeh Target measurement: % inflow Current: Average: no data 5-year Goal: To be determined

### Summary Description of Plan:

- 1- Digital archiving and indexing the paper files for water and wastewater connections applications.
- 2- Correction of water and sewerage customer database (X7, SIS, GIS) based on the findings of mass field survey and inspection.
- 3- Collect connections fees from illegally implemented connections discovered through the inspections.
- 4- Collect previously unbilled sewage usages fees.

Activity 1 Existing x New

**Office work:** Archiving 900,000 files ( 6 months, 40 labor, 8 computer pc, 8 Scanner), 300,000 plastic - file / damaged files Digital archiving and indexing the paper files for water and wastewater connections applications.

Activity 2 Existing x New

Site work: ( 6 office labor, 24 field labor for survey, 24 PDA, 8 cars (3 years)

- base line 500 inspections per day

Activity 3 Existing x New

IT: import data obtained from field during the survey – upload to update customers database

Activity 4 Existing x Nev

Prepare financial claims to collect connections fees from illegally implemented connections discovered through the inspections and unbilled sewage usages fees.

6 office employees.

Plan description

### Strategic Objective: 2.0 Provide wastewater collection & treatment services

**Coordinating Directorate:** Customer Services

Coordinator: Amjad Lubbadeh

- 1- Digital archiving and indexing the paper files for water and wastewater connections applications.
- 2- Correction of water and sewerage customer database (X7, SIS, GIS) based on the findings of mass field survey and inspection.
- 3- Collect connections fees from illegally implemented connections discovered through the inspections.
- 4- Collect previously unbilled sewage usages fees.

	New/	20	13	20	14	20	15	20	116	20	17	То	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-office work: Archiving 900,000 files	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	6,800	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	6,800	-	-	-	-	-	-	-	-	-	6,800
Activity 2- site work: (3 years) base line 500 inspection daily	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		48,000	4,800	48,000	-	48,000	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		48,000	4,800	48,000	-	48,000	-	-	-	-	-	144,000	4,800
Activity 3-IT: import data surveyed - database Miyahuna	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Activity 4- Wastewater requests for customer to pay	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 4		-	-	-	-	-	-	-	-	-	-	-	-
Total		48,000	11,600	48,000	-	48,000	-	-	-	-	-	144,000	11,600

Strategic Element: 2.3 Implement wastewater reuse	Strategic Element: 2.3 Implement wastewater reuse												
Strategic Objective: 2.0 Provide wastewater collection & treatment services													
Coordinating Directorate: Operations	Concerned Directorates: Ops, P&Q	Coordinator: Hafez Battah											
Target measurement: Wastewater effluent disposed	Current: Average: 0% reuse	5-year Goal: 100% reuse											

### Summary Description of Plan:

- Define the suitable locations for waste water reuse and the area could be irrigated
- Define suitable kinds of crops that consumes continuous large amounts of reclaimed water and suitable to be irrigated by existing effluent water
- Utilize the experience of other similar utilities who are implementing waste water reuse locally & neighboring countries
- Treatment plants rehabilitation to improve the effluent quality
- Prepare the chosen areas for irrigation
- Define the needs of local market of crops and marketing
- Define the needed tools, machinery & equipment
- Define the manpower needed
- Study the ELA of the project

Activity 1	Existing	х	New
Prepare the available area to be in	rigated		
Activity 2	Existing	Х	New
Implement internal networks for in	nternal reuse		
Activity 3	Existing	х	New
Choose the suitable crops can be r	narketed and allowable to	be used in th	e Jordaniar
Notes:			

Plan description

### Strategic Element: 2.3 Implement wastewater reuse

### Strategic Objective: 2.0 Provide wastewater collection & treatment services

Coordinating Directorate: Operations

- Coordinator: Hafez Battah
- Define the suitable locations for waste water reuse and the area could be irrigated
- Define suitable kinds of crops that consumes continuous large amounts of reclaimed water and suitable to be irrigated by existing effluent water
- Utilize the experience of other similar utilizes who are implementing waste water reuse locally & neighboring countries
- Treatment plants rehabilitation to improve the effluent quality
- Prepare the chosen areas for irrigations
- Define the needs of local market of crops and marketing
- Define the needed tools, machinery & equipment
- Define the man power needed
- Study the ELA of the project

	New/	20	13	20	14	20	15	20	16	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Prepare the available area to be irrigated	New												
Labor		-	-	-	-	-		-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- Implement internal networks for internal reuse	New												
Labor		-	-	31,290	-	32,741	-	34,264	-	35,863	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	70,000	-	26,667	-	26,667	-	26,667		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	31,290	70,000	32,741	26,667	34,264	26,667	35,863	26,667	134,158	150,000
Activity 3-Choose the suitable crops can be marketed and allowable to be used in the Jordanian standard	New												
Labor		-	-	-	-	-		-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	10,000	-	10,000	-	10,000	-	10,000		
Total-Activity 3		-	-	-	10,000	-	10,000	-	10,000	-	10,000	-	40,000
Total		-	-	31,290	80,000	32,741	36,667	34,264	36,667	35,863	36,667	134,158	190,000

trategic Element: 2.4 Construct wastewater network connections and expansion											
Strategic Objective: 2.0 Provide wastewater colle	ction & treatment services										
Coordinating Directorate: Technical Services	Concerned Directorates: TS, CS	Coordinator: Laila Abu Rabee									
Target measurement: Coverage ratio of water customers	Current: Average: 80%	5-year Goal: 90%									

Summary Description of Plan:

Study, design and execute the sewer network extension with different diameters to serve new residential areas that need sewer service and have applications: total length of 220 km to serve 3550 house connections.

Activity 1 X Existing New

Study, design, list and prioritize new connection applications according to length of network and number of house connections and cost

Activity 2 X Existing New

Prepare tender document and award contract of approximately 5 million JD or 50 Km per year of different diameter (from 200mm to 300 mm); may be divided two contracts.

Activity 3 Existing New

Supervise the contract after awarding through supervision department / external consultancy service.

Notes: According to Activity 1, the study and design does not include Shafa Badran area. Also, it does not include the daily requests submitted to Customer Services and constructed under their supervision. These must be added to priority tables and are estimated at 10-20 km per year.

Strategic Objective: 2.0 Provide wastewater collection & treatment services

Coordinating Directorate: TS, CS Coordinator: Laila Abu-Rabea

Plan description

Study and Design and Execute Sewer network extension with different diameters to serve new residential areas that need sewer service and have applications, total lengths of 220 km serve 3550 house connections.

<u>'</u>	and nave	applicatio	ns, total leng	gths of 22	J km serve .	3550 hous	e connectio	ns.	<u> </u>				
	New/	20	113	20	014	20	015	20	016	20	17	T	otal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Study, design, list, and prioritize new connection applications	Existing												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- Prepare tender document, and award contract	Existing												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000		
Total-Activity 2		-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000	-	25,000,000
<b>Activity 3</b> -Supervise the contract after awarding	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	200,000	-	200,000	-	200,000	-	200,000		
Total-Activity 3		-	-	-	200,000	-	200,000	-	200,000	-	200,000	-	800,000
Total		-	5,000,000	-	5,200,000	-	5,200,000	-	5,200,000	-	5,200,000	-	25,800,000

Strategic Element: 3.1 Implement improvements t	o water network system							
Strategic Objective: 3.0 Prepare for improved water supply								
Coordinating Directorate: Technical Services	Concerned Directorates: TS, Ops	Coordinator: Wafaa Al-Naji & Ali Omari						
Target measurement: CDM study	Current: Average: Not applicable	5-year Goal: 100% Implementation						

### **Summary Description of Plan:**

- To prepare the water system to receive Disi water, the main aspects have been taken into account:
- 1. Technical aspects of water delivery (bringing the water to the required zones and districts, storing and distribution)
- 2. Operational aspects of water delivery (flow and pressure control)
- 3. Financial aspects
- 4. Other operational improvements like SCADA, management building, training

Activity 1	х	Existing	New				
Prioritize the needed investment to receive Disi Water (on going between Miyahuna, USAID, and CDM consultant)							
Activity 2		Existing	х	New			
Detailed design and tender documents for immediate and short term investments (CDM -USAID funded)							
Activity 3		Existing	х	New			
Implementation through contractors and supervision for immediate and short term investments. [Materials and equipment are sovered under							

Implementation through contractors and supervision for immediate and short term investments. (Materials and equipment are covered under implementation contracts.)

Notes: Notes: estimated cost for immediate and short investments are \$ 39.23 million, around 27.7 M JDS (exchange rate = .706)

Plan description

### Strategic Element: 3.1 Implement improvements to water network system

Strategic Objective: 3.0 Prepare for improved water supply

Coordinating Directorate: TS, Ops Coordinator: Wafaa Al-Naji & Ali Omari

To prepare the water system to receive Al DISI water, the main aspects

have been taken into account :

 $1. \, {\sf Technical \ aspects \ of \ water \ delivery \ (bringing \ the \ water \ to \ the \ required \ zones \ and \ districts, \ storing \ and \ distribution)}$ 

2. Operational aspects of water delivery (flow and pressure control)

3. Financial aspects

 ${\it 4. \ Other \ operational \ improvements \ like \ SCADA, \ management \ building,}$ 

training

	training												
	New/ 2013		2013	2014		2015		2016		2017		Total	
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Prioritize the needed investment to receive DISI Water	Existing												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- Detailed Design and tender Documents for Immediate and short term investments	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	1-1	-	-	-	-	-	-	-	-	-
Activity 3-Implementation thru contractors and Supervision for immediate and short term investments	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	11,000,000	-	14,300,000	-	5,500,000	-	-	-	-		
Total-Activity 3		-	11,000,000	-	14,300,000	-	5,500,000	-	-	-	-	-	30,800,00
Total		-	11,000,000	-	14,300,000	-	5,500,000	-	-	-	-	-	30,800,00

Strategic Element: 3.2 Implement improvements to wastewater network system										
Strategic Objective: 3.0 Prepare for improved water supply										
Coordinating Directorate: Technical Services Concerned Directorates: TS, Ops Coordinator: Wafaa Al-Naji & Hafez Battah										
Target measurement: CDM study Current: Average: Not applicable 5-year Goal: 100% Implementation										

#### Summary Description of Plan:

Where sewer deficiencies are found within Greater Amman, improvements are identified by CDM consultant via hydraulic modeling. Sewer projects will be designed and implemented to include improvements to increase sewer hydraulic capacity and reconstruction of sewers in backfilled wadis to regain access for maintenance.

Activity 1	Existing	x	New					
1. Prepare detailed design and tender document for immediate and short term investments								
Activity 2 Existing x New								
2. Implementataion and supervision for immediate and short term investments. (Materials and equipment are covered under implementation								

projects.)
Activity 3 Existing New

Notes:

Capacity improvements length (total projects length)= 74.287 km, estimated cost for short and immediate capacity improvement investments = \$36.68 M (around 25.9 M JD)

2.Reconstrcution of sewers in backfilled wadis total lengths = 19km, estimated cost = \$7.1 M (around 5M JDs)exchange rate is .706

#### Strategic Element: 3.2 Implement improvements to wastewater network system

Strategic Objective: 3.0 Prepare for improved water supply

Coordinating Directorate: TS, Ops Coordin

Coordinator: Wafaa Al-Naji & Hafez Battah

Plan description

Where sewer deficiencies are found within Greater Amman, improvements are identified by CDM consultant via hydraulic modeling. Sewer projects will be designed, implemented to include improvements to increase sewer hydraulic capacity and reconstruction of sewers in backfilled wadis to regain access for maintenance.

	New/	2	013	2	014	20	15	20	116	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Prepare detailed design and tender document	New												
Labor		-											
Materials		-											
Equipment		-											
Other		-	1,500,000		-		-		-		-		-
Total-Activity 1		-	1,500,000	-	-	-	-	-	-	-	-	-	1,500,000
Activity 2- Implementataion and Supervision	New												
Labor		-											
Materials		-											
Equipment		-											
Other		-	12,500,000		11,000,000		6,600,000		-		-		-
Total-Activity 2		-	12,500,000	-	11,000,000	-	6,600,000	-	-	-	-	-	30,100,000
Total		-	14,000,000	-	11,000,000	-	6,600,000	-	-	-	-	-	31,600,000

#### Summary Description of Plan:

By receiving additional supplies upon the completion of Disi project, the amount of water available will be enough to move the city from the current intermittent supply regimen to improved supply. This will certainly alter the hydraulics of the supply network.

In relation to customers' consumption metering and billing, the concern lies in the performance quality of existing and currently used types of meters

Logically, having water available all the time re-filling customers roof storage tanks means that the intake will be at much lower flow rates compared to the flow rate when the storage tank had be to filled quickly during 24-36 hours in the assigned supply day under the intermittent supply regimen.

Knowing that multi jet class B meters have very limited registration accuracy at low flow rates, consequently losing revenues, meters have to be replaced to avoid under billing.

The plan is to replace about 422,000 meters. That is the estimated total number of customers by the end of 2013. It does not include 22% of customers in the lowest tariff slice where meter replacement is not necessary.

Number of customers by 2013 = 544,000

Number of customers in the lowest tariff slice = 122,000

Estimated cost of the project = 50 million JD

Activity 1	Existing	x New							
Identify the most economic and technically viable type (s) of meters.									
Activity 2	Existing	New							
Design the best implementation plan based	on cost, financing	scheme, time							
Activity 3	Existing	New							
Secure the needed funds.									
Notes:									

Total

12,500,000

Strategic Element	Strategic Element: 3.3 Replace current meters with appropriate meters												
Strategic Objective	Strategic Objective: 3.0 Prepare for improved water supply												
Coordinating Directorate: Customer Services         Coordinator: Abeer Momani													
Plan description The plan is to replace 422,000 meters by the end of 2014 with an estimated cost of 30 million JD													
	New/	20	013	20	014	2	015	2	016	20	17	To	otal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Replace Cuctomers meter	New												
Labor													
Materials													
Equipment													
Other		-	12,500,000	-	25,000,000	-	12,500,000	-	-	-	-		
Total Activity 1			12 500 000		2E 000 000		12 500 000						EU 000 000

12,500,000

50,000,000

25,000,000

5-year Goal: 100% Implementation

#### Strategic Element: 3.4 Implement customer awareness program for improved water supply Strategic Objective: 3.0 Prepare for improved water supply Coordinator: Journana Al-Ayed Coordinating Directorate: Communications Concerned Directorates: Com

Summary Description of Plan: In 2013, Miyahuna will provide Disi water to Amman citizens, with more water being delivered more often. This shift in water supply is a major change to customers adapted to rationed water supply. This will affect their behavior and water use practices on household level. Raising people's awareness is crucial to ensure realistic perceptions about cost of water, water quality, NRW, especially water theft; also reporting water leaks due to pipe breaks, and water meter replacement. Customers and Miyahuna's technical and administrative teams need to be aware of adopting water saving practices and internal network maintenance.

Current: Average: Not applicable

Target measurement: Develop Communications Plan

There is lack of solid consistent information about Disi water. Assessing public perceptions (strengths, opportunities & threats) about Disi water consequences and their expectations and reflections, will enable Communications Dept. to design Miyahuna's messages to meet the public's needs. Assessment of customer perceptions will be conducted during fourth quarter of 2012. The survey is to be conducted internally by targeting customers visiting Miyahuna customer service offices or calling the complaints and control center (CCC), and face to face communications through Miyahuna field staff will be used for this purpose in addition to the website.

Miyahuna staff should be well informed and updated about Disi water supply, to ensure their capability to provide accurate information to people, this complies with Miyahuna's brand and vision as its commitment for excellence, and values of transparency and reliability. Updates will be provided by several means such as meetings with CEO, staff periodical newsletter, daily electronic magazine, in addition to contests, update sessions, and intranet.

As a water and wastewater service provider, Miyahuna is responsible for disseminating clear relevant messages to its customers means to avoid any

satisfaction to a highest level.  Activity 1 Existing	x New		
xplore public expectations about Disi. Survey to be impleme		Cost limited to printing (1000 a	uostionnairos i
ouse)	ented during the 4th quarter 2012 by Myanuna Stant. C	ost tillited to printing (1000 q	uestioiiiiaii es i
mplement a survey to customers visiting CS offices; 2) Fiel	d survey – question customers at their homes by met	er readers and jabis; 3) Webs	ite survey
Activity 2 Existing	x New		
ublic Awareness			
Customer newsletters with information on Disi water: new we esources, cost, NRW, water quality, maintaining internal ne laims about leaks, water conservation	20 000 poweletters produced on biann	ual 40.000 unit /year	8000/year
roduce TV spots on Disi – broadcast on JTV before the maassuming external funding available)	TV spots (production & broadcasting)	5 in 2013	250.000
Media articles about Disi & newspaper ads	NP ads	40 ads	50.000
se social media to promote Disi	No cost		
stablish civil advising group - selected are influential peop ommunity	le from local Meetings/field trips	4meetings/year	4000
Organize customers open days at CS offices on national occa istribute Disi related gifts and materials	isions –	2 open days /year	5000
Produce and broadcast short film about Disi on LCD's at Miy ffices	vahuna CS  No cost –film to be produced in-house		
Produce and distribute door hangers to announce the startir vater pumping to household in distribution zones	g of Disi Door hangers	100.000 to be produced in 2013	3000
roduce leaflets about Disi and distribute to customers with eceipts after paying their water bills at Miyahuna offices	their bill Leaflets	20.000/ year	4000/year
roduce and distribute specialized brochures	3 Specialized brochures	15000/year	3000/year
rganize focus groups/workshops – women & youth	3workshops/year/group	6/year	3000/year
ctivity 3 Existing	x New		
Vater Efficiency			
roduce and distribute brochures about water conservation ousehold level	practices at Water conservation brochures	3000/year	600/year
rganize water awareness sessions on water conservation p vomen/youth/school children)	ractices Same as point 11/ Activity 2 above		
romote water saving devices in cooperation with peer orga	nizations To be determined in cooperation with o	other peer organizations	

Water conservation brochures		3000/year	600/year
Same as point 11/ Activity 2 above	e		
To be determined in cooperation	with other pe	er organizations	
Awareness activities		4/target group/year	4000
x New			
Ct-fftitit- CEO		11	2000
Staff meetings with CEO		4/year	2000
No cost		4/year	2000
	2/year	4/year	6000
	Same as point 11/ Activity 2 abov  To be determined in cooperation  Awareness activities  x New	Same as point 11/ Activity 2 above  To be determined in cooperation with other per  Awareness activities  x New	Same as point 11/ Activity 2 above  To be determined in cooperation with other peer organizations  Awareness activities 4/target group/year  x New

# Strategic Element: 3.4 Implement customer awareness program for improved water supply

Straegic Objective: 3.0 Prepare for improved water supply

Coordinating Directorate: Communication Coordinator: Journana Al-Ayad

Plan description

As a water and wastewater service provider, Miyahuna is responsible for disseminating clear relevant messages to its customers, through all possible means to avoid any inconveniences and negative perceptions to ensure that such huge transformation in water service provision is a great success, aiming at raising customer satisfaction to a highest level.

	New/		113		114		015		016	20	017	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Explore Public Expectations about Disi	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2-Public Awareness	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		322,000	-	69,000	-	-	-	-	-	-	-		
Total-Activity 2		322,000	-	69,000	-	-	-	-	-	-	-	391,000	-
Activity 3-Water Efficiency	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		4,600	-	4,600	-	-	-	-	-	-	-		
Total-Activity 3		4,600	-	4,600	-	-	-	-	-	-	-	9,200	-
<b>Activity 4</b> -Communication Disi to Staff	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		10,000	-	10,000	-	-	-	-	-	-	-		
Total-Activity 4		10,000	-	10,000	-	-	-	-	-	-	-	20,000	-
Total		336,600	-	83,600	-	-	-	-	-	-	-	420,200	-

Strategic Element: 4.1 Each customer recei	ves a timely accu	rate invoice		
Strategic Objective: 4.0 Manage customer r	elations			
Coordinating Directorate: Customer Service	es	Concerned Directorate	s: CS	Coordinator: Jihad Majali
Target measurement: Doorstep billing perc	entage	Current: Average: 94%	ı	<b>5-year Goal:</b> 100%
requires work on different aspects, which wi analyze the reasons, and take corrective act	ll be achieved by ions on those that correcting and u ng system for met	cleansing the customer require field investigat odating where needed. er readers. In order to	data ions, Also, keep	
Activity 1	Existing	х	Ĭ.	New
Cleansing of customer database. Start date: May 2012 Finish date : Dec 2013				
Activity 2	Existing	2	K	New
Updating customer locations on billing route Start date: continuous activity Finish date: Dec 2017	?S.			
Activity 3	Existing	;	K	New
Integration of X7 & GIS systems. Start date: to be decided by IT Finish date: to be decided by IT Note: This is an IT project.				
Activity 4	Existing		K	New
Implementation of tracking system to track ( Start date: to be decided by IT Finish date: to be decided by IT Note: This is an IT project.	readers in the fiel	d.		
Activity 5	Existing	2	x	New

Handheld unit replacements. Start date: 2014 Finish date : 2015

#### Strategic Element: 4.1 Each customer receives a timely accurate invoice

Strategic Objective: 4.0 Manage customer relations

Coordinating Directorate: CS Coordinator: Jehad Majali

 $Plan\ description$ 

The aim of this plan to increase the billing percentage and reach 100%, delivering an accurate and timely bill to each and every customer, this requires work on different aspects, which will be achieved by cleansing the customer database by identifying customers who receive bills, analyze the reasons, take corrective actions those will require field investigations, and analyze case by

	case												
	New/	20	113	20	114	20	15	20	116	20	17	То	tal
	Existing	OPEX	CAPEX										
<b>Activity 1</b> -Cleansing of customer database.	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- Updating customer locations on billing routes.	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-Integration of X7 & GIS systems.	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 3													
Activity 4-Implementation of tracking system to track readers in the field.	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 4													
Activity 5-Hand Held Unit replacements.	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 5													
Total		-	-	-	-	-	-	-	-	-	-	-	-

#### Strategic Element: 4.2 Improve accounts collected

#### Strategic Objective: 4.0 Manage customer relations

Coordinating Directorate: Customer Services Concerned Directorates: CS Coordinator: Amer Matalqa

Target measurement: Invoiced amount collected Current: Average: 99% 5-year Goal: 100+%

Summary Description of Plan: This project will be in 2 phases:

Collection from disconnected subscribers (old debt)

Collection from active subscribers. The methodology will be to gather historical data from CS Data Base and X7 and develop a list that will be used to implement this project. Field work will be needed to work on this list.

The major goal for this project will be to collect at least 40% from total amount.

Activity 1 Existing X New

- 1) Old debt: history data from database –sort into groups according to attached plan
- 2) Telephone contact with customers
- 3) Field visits for the customers with address and no telephones.
- 4) Violation procedures

Starting 1 July 2012

Activity 2 Existing X New

- 1) Office work/preparation database for the customer which will be targeted according to plan from the list distributed to teams that will go to field.
- 2) Field work is to collect amount due or disconnect meter.
- 3) Violation procedures.

Starting 1 July 2012

Notes: Target 40% from total amount to be collected, starting from 1 July 2012

# Straegic Objective: 4.0 Manage customer relations

Coordinator: Amer Matalqa

1-collection from disconnected subscribers (Old Debt)

 $Plan\ description$ 

2-collection from active subscribers. The methodology will be to gather historical data from CS Data Base and X7 and develop a list that will be used to implement this project. Field work will be needed to work on this list.

The major goal for this project will be to collect at least 40% from total amount.

	New/	20	13	20	14	20	15	20	116	20	17	Tot	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-old debt	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-		-	-	-	-		
Equipment		72,000	800	72,000	-	72,000	-	-	-	-	-		
Other		-	-	-	-	-		-	-	-	-		
Total-Activity 1		72,000	800	72,000	-	72,000	-	-	-	-	-	216,000	800
Activity 2- office work	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	2,000	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	2,000	-	-	-	-	-	-	-	-	-	2,000
Total		72,000	2,800	72,000	-	72,000	-	-	-	-	-	216,000	2,800

Strategic Element: 4.3 Optimize custom	ner satisfaction		
Strategic Objective: 4.0 Manage custom	er relations		
Coordinating Directorate: Communication	Coordinator: Joumana Al-Ayed		
Target measurement: % customer satis	faction <b>Current</b> : Average:	73%	5-year Goal: 85%
oriented company, aims at providing clear reliable, and transparent water utility the	ar, direct, and consistent comm at truly cares about its custome	nunications with its cus ers by being interactive	od customer relations. Miyahuna, as a customer tomers. Miyahuna is recognized as trustworthy, and responsive. To comply with its vision, ve its overall goals while bridging trust gap both
Activity 1	Existing	New	
Customer satisfaction surveys			
1) Conduct annual customer satisfaction survey, by an external party	Customer Satisfaction survey	1/year	14000/year
2)Conduct internal customer satisfaction survey in specified subjects	According to needs	2-3/year	No cost-survey is conducted by comm staff
3)Conduct website surveys in specified subjects	According to needs	2-3/year	No cost-survey is conducted by comm. staff
4)Customer complaint and suggestions methodology		Continuous	No cost-complaints & suggestions are collected and follow up is made by comm. staff
Activity 2	Existing	New	
Miyahuna image/reputation			
1)Improve and update website		No cost	
2)Use social media		No cost	
Customer Newsletters to be distribut	ed with water hill	Activity 2/1 above	
3, 545,511,511,511,511,511,511,511,511,511,		7.6.111.7 2, 1 42010	
Activity 3	Existing	New	
Publicize achievements/ disseminate inf	ormation		
1) Preparation & commitment to media water quality/ challenges/new application		in advance/ informatio	n about No cost
2)Publicize achievements (progress achi electronic payments or mobile services)	such as No cost		

# Strategic Element: 4.3 Optimize customer satisfaction

Strategic Objective: 4.0 Manage customer relations

Coordinating Directorate: Com

Coordinator: Joumana Al-Ayad

Plan description

Optimizing customer satisfaction is a result of high quality service provided, combined with good customer relations. Miyahuna, as a customer oriented company, aims at providing clear, direct, and consistent communications with its customers. Miyahuna is recognized as trustworthy, reliable, and transparent water utility that truly cares about its customers by being interactive and responsive. To comply with its vision, mission, and values, Miyahuna should coordinate strategic communications approach to achieve its overall goals while bridging trust gap both inside and outside the company.

	New/		13		14 114		15		16	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-customer satisfaction surveys	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		14,000	-	14,000	-	14,000	-	14,000	-	14,000	-		
Total-Activity 1		14,000	-	14,000	-	14,000	-	14,000	-	14,000	-	70,000	-
Activity 2-Miyahuna image/reputation	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-Publicize achievements/ disseminate information	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		14,000	-	14,000	-	14,000	-	14,000	-	14,000	-	70,000	-

#### Strategic Element: 5.1 Complete GIS system-water delivery

#### Strategic Objective: 5.0 Enhance business operations

Coordinating Directorate: IT Concerned Directorates: IT, Ops, TS CS Coordinator: Omar Malkawi

Summary Description of Plan: Two main activities, the water network and the house connections.

The water network contains two parts:

1st : Primary & secondary water network as well as the raw water check & update & location

2nd: Tertiary water lines to be checked and updated according to DZ & rationing under maintenance zones.

The second activity is the house connections to be checked and updated as well as connection of the customer database (X7) with GIS.

The water network length is approximately 8200 km.

Activity 1 Existing x New

Primary & Secondary water network check and update location, target 95% or more. This activity needs historical data, a check team (office & field), and training.

Activity 2 Existing New

Tertiary water network check and update according to DZ & rationing under maintenance zones - target 95% or more. This activity needs pipe lengths/DZ and historical data, check team (office & field), training, choice of pilot area, 3 teams for maintenance zones, and equipment.

Activity 3 Existing New

House connection update & correction location (delivery points). Connection to X7 to GIS.

Activity 4 Existing Nev

Notes: Notes: Cooperation and coordinating with OPS, CS, and TS Directorates. Acquiring needed equipment, training, and qualified staff. 3 cars.

# Strategic Objective: 5.0 Enhance business operations

Coordinating Directorate: IT, Ops, TS CS Coordinator: Omar Malkawi

Two main activities, the Water Network and the House Connections.

The Water Network contains two parts:

1st : Primary & Secondary Water Network as well as the raw water check & update & location Plan description

2nd : Tertiary water lines...to be checked and updated according to DZ & rationing under maintenance Zones.

The second activity is the House Connections to be checked and updated as well as connection of the customers database (X7) with GIS .

The Water Network length is approximately 8200 km.

	New/	20	13	20	114	20	115	20	116	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Primary & Secondary Water Network check and update location	New												
Labor		27,160	-	29,082	-	31,141	-	33,349	-	35,715	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	91,100	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		27,160	91,100	29,082	-	31,141	-	33,349	-	35,715	-	156,446	91,100
Activity 2- Tertiary water Network check and update according to DZ & rationing under maintenance Zones	New												
Labor		10,710	-	11,419	-	12,175	-	12,982	-	13,842	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		10,710	-	11,419	-	12,175	-	12,982	-	13,842	-	61,129	-
Activity 3-House Connection update & correction location	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		37,870	91,100	40,501	-	43,316	-	46,331	-	49,558	-	217,575	91,100

Strategic Element: 5.2 Complete GIS system-waste	water collection			
Strategic Objective: 5.0 Enhance business operatio	ns			
Coordinating Directorate: IT	Concerned Directorates:	IT, O	ps, TS CS	Coordinator: Omar Malkawi
Target measurement: % customers listed with CS	Current: Average: 50%			5-year Goal: 100%
Summary Description of Plan: Two main activities, the wastewater network check & update & location The second activity is the house connections check and The wastewater network length is approximately 270.	according to Greater Amman M and update as well as connectio	1unic	cipality areas.	database (X7) with GIS.
Activity 1	Existing	X	New	
The Wastewater Network check & update & location	according to GAM areas.			
Activity 2	Existing		New	
House Connections check and update as well as con	nection of the customers datab	ase	(X7) with GIS.	
Activity 3	Existing		New	

Notes: Notes: Cooperation and coordination with OPS, CS, and TS Directorates. Acquire needed equipment, training, qualified staff, 2 cars.

Plan description

#### Strategic Element: 5.2 Complete GIS system-wastewater collection

Strategic Objective: 5.0 Enhance business operations

Coordinating Directorate: IT, Ops, TS CS

Two main activities, the Wastewater Network and the House Connections.

The Wastewater Network check & update & location according to GAM  $% \left( A_{1}\right) =A_{1}\left( A_{2}\right) +A_{3}\left( A_{3}\right) =A_{3}\left( A_{3}\right) +A_{3}\left( A_{3}\right) +A_{3}$ 

The second activity is the House Connections check and update as well as connection of the customers' database (X7) with GIS.

Coordinator: Omar Malkawi

The Water Network length is approximately 2700 km.

	New/	20	13	20	114	20	15	20	16	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-The Wastewater Network check & update & location according to GAM areas.	New												
Labor		46,200	-	49,264	-	52,534	-	56,026	-	59,753	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	91,100	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		46,200	91,100	49,264	-	52,534	-	56,026	-	59,753	-	263,777	91,100
Activity 2- House Connections check and update as well as connection of the customers database (X7) with GIS .	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-		-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Total		46,200	91,100	49,264	-	52,534	-	56,026	-	59,753	-	263,777	91,100

Strategic Element: 5.3 Reduce energy usage											
Strategic Objective: 5.0 Enhance busine	Strategic Objective: 5.0 Enhance business operations										
Coordinating Directorate: P&Q	Concerned D	irectorates: All	Coordinator: Vacant								
Target measurement: Kwh/m³	Current: Ave	rage: To be determined	5-year Goal: 5% reduction								
Summary Description of Plan: To be det	ermined.										
Activity 1	Existing	New									
Activity 2	Existing	New									
Activity 3	Existing	New									
Activity 4	Existing	New									
Notes:											

Straegic Objective: 5.0 Enhance business operations

Coordinating Directorate: All Coordinator: Plan description

Coordinating Direc	torate: All		'	Coordina	tor: Plan d	escription	1						
	New/		2013 2014			2	015	2	016	2017		Т	otal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3	New												
Labor													
Materials													
Equipment													
Other													
Total-Activity 3													
Total		-	-	-	-	-	-	-	-	-	-	-	-

Strategic Element: 5.4 Implement supply chain i	mprovemen	ts		
Strategic Objective: 5.0 Enhance business opera	tions			
Coordinating Directorate: Finance		Concerned Director	ates: All	Coordinator: Ahmad Lozi
Target measurement: Reduce time to procure goods and services Quality of goods and services		<b>Current: Average:</b> To be determined To be determined		<b>5-year Goal:</b> 10% reduction 100% compliance with specifications
Summary Description of Plan: The improvement of supply chain management sp	pecially proc	urements process		
Activity 1	Existing	х	New	
The improvement of specifications for all request	ed materials	an works		
Activity 2	Existing	х	New	
To reduce the technical evaluation report				
Activity 3	Existing		New	
To introduce procurement management system				
Notes: The Department requires: 1 – Procurement software 2 - E-procurement 3 - Barcode for inventories				

# Strategic Element: 5.4 Implement supply chain improvements

Straegic Objective: 5.0 Enhance business operations

Coordinating Directorate: All Coordinator: Ahmad Lozi

Plan description The improvement of supply chain management specially procurements process

rtail description	New/ 2013 2014 2015 2016 2017												
	New/												tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-The Improvement of Specifications for all requested materials an works	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- To Reduce the technical evaluation report	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-To introduce procurement management system	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	40,000	-	-	-	-	-	-	-	-		
Total-Activity 3		-	40,000	-	-	-	-	-	-	-	-	-	40,000

Strategic Element: 5.5 Implement comprehensive Enterprise F	Strategic Element: 5.5 Implement comprehensive Enterprise Resource Planning (ERP)						
Strategic Objective: 5.0 Enhance business operations							
Coordinating Directorate: IT	Concerned Directorates: IT	Coordinator: Abdullah Shalot					
Target measurement: ERP Plan	Current: Average: To be determined	5-year Goal: 100% Implementation					

Summary Description of Plan: To provide highest service standards to customers, the company has launched concept of digital management of all its work, hoping to reach higher levels of efficiency and to reduce costs and improve customer service. The role of IT directorate in all matters relating to information technology in the company in terms of hardware, software and information is to help upgrade company services to the level of their better aspirations.

Activity 1 Existing x New

- Develop a strategic plan for IT and information systems to identify the objectives of information systems and linking them to the objectives of the company.
- Study the company organizational structure (restructuring) and the functions of departments and sections (process re-engineering) from the IT point of view.
- Study the company general strategy and the various development plans such as a management development plan, manpower development plan, and financial resources development plan.

Activity 2 Existing x New

- Identify the information systems required for the company, and prioritize systems and programs.
- Study the requirements of manpower, staffing and training plan.
- Study the current situation of information systems and computer technology (Hardware, Software, GIS) and develop new standards for building and updating the systems.
- Develop and enhance infrastructure in the software section by restructure the software development life cycle (SDLC).

Activity 3 Existing x New

• Develop, test and deploy ERP modules as mentioned in the Business Automation and Systems Integration Plan.

Notes:

See IT Master Plan

# Strategic Element: 5.5 Implement a comprehensive ERP

Strategic Objective: 5.0 Enhance business operations

Coordinating Directorate:  $\ensuremath{\mathsf{IT}}$ 

Coordinator: Abdullah Shalot

Plan description

To providing highest service standards to customers, the company has launched concept of digital management of all its work, hoping to reach higher levels of efficiency and to reduce costs and improve customer service. The role of IT directorate in all matters relating to information technology in the company in terms of Hardware, Software and Information; aims to upgrading company services to the level of their better aspirations.

	New/		13		114		15	20	116	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Assesment	New												
Labor		82,320	-	88,906	-	96,018	-	103,699	-	111,995	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		82,320	-	88,906	-	96,018	-	103,699	-	111,995	-	482,939	-
Activity 2- Analysis	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-				
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-Develop, test and deploy ERP modules as mentioned in the Business Automation and Systems Integration plan	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		82,320	-	88,906	-	96,018	-	103,699	-	111,995	-	482,939	-

Strategic Element: 5.6 Implement SCADA, Phase 2		
Strategic Objective: 5.0 Enhance business operations		
Coordinating Directorate: Operations	Concerned Directorates: Ops	Coordinator: Iman Haddad
<b>Target measurement</b> : Primary and secondary water network controlled	Current: Average: To be determined	5-year Goal: 85%

Summary Description of Plan: Establish a project to monitor the amount of flow and pressure and quality of water networks and 325 subsidiary districts network and transfer this information to SCADA control center of Amman. The project aims to :

- 1. Keep archiving of information to be used in planning and future studies.
- $2.\ Provide\ real-time\ monitoring\ and\ continuous\ water\ network\ assist\ in\ the\ control\ and\ distribution.$
- 3. Compare to the possibility of meter reading for each sub network with total subscriber inside the zone to help the participants to follow up on

Activity 1	Existing	New	
Prepare site survey and detailed Design.			
Activity 2	Existing	New	
Prepare tender documents			
Activity 3	Existing	New	
Supply and install the equipment.			
Activity 4	Existing	New	
Operate the system and interface with SCADA	Amman.		
Notes:			

# Strategic Element: 5.6 Implement SCADA, Phase 2

# Strategic Objective: 5.0 Enhance business operations

**Coordinating Directorate: Operations** 

Coordinator: Iman Haddad

Establish a project to monitor the amount of flow and pressure and quality of water networks and 325 subsidiary districts network

and transfer this information to SCADA control center of Amman.

The project aims to:

Plan description

- 1. Keeping archiving of information to be used in planning and future studies .
- $2.\ provide\ real-time\ monitoring\ and\ continuous\ water\ network\ assist\ in\ the\ control\ and\ distribution\ .$
- 3. compared to the possibility of meter reading for each sub net with total subscriber inside the zone to help the participants to follow up on water

	New/	20	13	2	014	20	15	20	116	20	17	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Prepare site survey and detailed Design.	New												
Labor		16,170	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	40,050	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		16,170	40,050	-	-	-	-	-	-	-	-	16,170	40,050
Activity 2-Prepare Tender documents	New												
Labor		-	-	19,950	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	19,950	-	-	-	-	-	-	-	19,950	-
Activity 3-Supply and install the equipment.	New												
Labor		-	-	-	-	13,300	-	14,231	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	4,932,500	-	-	-	-	-	-		
Total-Activity 3		-	-	-	4,932,500	13,300	-	14,231	-	-	-	27,531	4,932,500
Activity 4-Operate the system and interface with SCADA Amman.	New												
Labor		-	-	-	-	-	-	-	-	8,120	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 4		-	-	-	-	-	-	-	-	8,120	-	8,120	-
Total		16,170	40,050	19,950	4,932,500	13,300	-	14,231	-	8,120	-	71,771	4,972,550

Strategic Element: 5.7 Purchase Headqu	arters Building					
Strategic Objective: 5.0 Enhance busines	ss operations					
Coordinating Directorate: HR	Concern	ed Director	ates: HR,	TS & Fin	Coordinator: HR	
Target measurement: Headquarters sta	Current:	Average: N	lot applica	5-year Goal: Relocation of Miyahuna Headquarters Building		
Summary Description of Plan: Miyahuna will purchase a new headquart	ers building for u	se by the J	labal Husse	in and Ras	s Al-Ein s	taff.
Activity 1	Existing	l	х	New		
Procure new headquarters building						
Activity 2	Existing	l	х	New		
Refurbish headquarters spaces						
Activity 3	Existing	l		New		
Furnish headquarters spaces.						
Notes:						

# Strategic Element: 5.7 Purchase Headquarters Building

Strategic Objective: 5.0 Enhance business operations

**Coordinating Directorate**: Human Resources

 ${\sf Coordinator}$ 

Plan description Miyahuna will purchse a new headquarters building for use by Jabal Hussein staff.

	New/	2	013	:	2014	20	115	20	116	20	17	T	otal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Purchase new Headquarters Building	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	1,500,000	-	2,400,000	-	-	-	-	-	-		
Total-Activity 1		-	1,500,000	-	2,400,000	-	-	-	-	-	-	-	3,900,000
Activity 2-Refurbish Headquarters spaces	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-Furnish Headquarters Building	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		_	1.500.000		2.400.000		-	_	_	_	_	_	3.900.000

Strategic Element: 5.8 Construct Zai Warehouse Strategic Objective: 5.0 Enhance business operations											
Target measurement: Construct was	ehouse	Current: Average: I	Not applicable	5-year Goal: Construct warehouse							
Summary Description of Plan: Build new main warehouse and exter Warehouse building-5,000 m <sup>2</sup> Pipe yard: 20,000 m <sup>2</sup> Fenced yard: 6,000 m <sup>2</sup>	nsion of existing warehouse	e at Zai WTP									
Activity 1	Existing	х	New								
Contract warehouse building											
Activity 2	Existing	х	New								
Purchase forklift trucks											
Activity 3	Existing		New								
Notes:											

# Strategic Element: 5.8 Construct Zai Warehouse

# Strategic Objective: 5.0 Enhance business operations

Coordinating Directorate: Finance

Coordinator

Plan description

Build new main warehouse and extention of existing ware house at Zai WTP 1. Warehouse building-5,000 m<sup>2</sup> 2. Pipeyard-20,000  $m^2$  3. Fenced yard:  $6,000m^2$ 

	III J. Fei	nceu yan	u: 0,000m										
	New/	20	113	20	014	2	015	2	2016	20	17	1	otal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Prepare site survey and detailed Design.	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	500,000	-	1,000,000	-	1,000,000	-	-		
Total-Activity 1		-	-	-	500,000	-	1,000,000	-	1,000,000	-	-	-	2,500,000
Activity 2-Prepare Tender documents	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-Supply and install the equipment.	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	500,000	-	1,000,000	-	1,000,000	-	-	-	2,500,000

Strategic Element: 6.1 Keep water quality within	Jordanian standards								
Strategic Objective: 6.0 Comply with applicable la	ws and regulations								
Coordinating Directorate: Production & Quality	Concerned Directo	rates: P&Q, Ops	Coordinator: Majeda Alzobee						
Target measurement: Water quality standards	lards Current: Average: 99+% compliance 5-year Goal: 99+% compliance								
Summary Description of Plan: Ensure the complete compliance of quality of pum monitoring program. Obtain the accreditation for labs, improve and upg		rs with the Jordanian s	standards by the full implementation of water						
Activity 1	Existing	New							
Increase the scope of labs work This activity is an existing one and considered new	(responsibility: quality	department / P&Q)							
Activity 2	Existing	New							
Stabilize and increase the scope of accreditation for	or both national & inter	national accreditation							
Activity 3	Existing	New							
Implement the monitoring and operational programs as per the approved testing plan This is ongoing process since there is a yearly monitoring programs (responsibility: quality department/P&Q)									
Activity 4	Existing	New							
Review and update operational and process work i	nstructions based on r	isk assessment issues	s (responsibility: process department /P&Q)						
Activity 5	Existing	New							
Installation of UV unit for Zai And Russeifa treatme	ent plants (responsibili	ty: process departmen	nt /Q&P)						

Notes:

The role of Ops is to be clear and to suggest activity if possible.

# Strategic Element: 6.1 Keep water quality within Jordanian standards

Strategic Objective: 6.0 Comply with applicable laws and regulations

Plan description

Ensure the complete compliance of quality of pumped water to consumers with the Jordanian standards by the full implementation of water monitoring program.

Obtain the accreditation for labs, improve and upgrade lab testing.

						ade lab tes			1/		17		al .
	New/	20′		20		20		20		20		Tot	
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Increase the scope of labs work	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		7,800	2,000	7,800	-	7,800	-	7,800	-	7,800	-		
Total-Activity 1		7,800	2,000	7,800	-	7,800	-	7,800	-	7,800	-	39,000	2,000
Activity 2- Stabilize and increase the scope of accreditation for both national & international accreditation	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		18,000	-	18,000	-	18,000	-	18,000	-	18,000	-		
Total-Activity 2		18,000	-	18,000	-	18,000	-	18,000	-	18,000	-	90,000	-
Activity 3-Implement the monitoring and operational programs as per the approved testing plan	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		4,200	-	4,200	-	4,200	-	4,200	-	4,200	-		
Total-Activity 3		4,200	-	4,200	-	4,200	-	4,200	-	4,200	-	21,000	-
Activity 4-Review and update operational and process work instructions based on Risk assessment issues	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 4		-	-	-	-	-	-	-	-	-	-	-	-
Activity 5-Installation of UV unit for Zai And Russifa treatment plants	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	25,000	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 5		-	25,000	-	-	-	-	-	-	-	-	-	25,000
Total		30,000	27,000	30,000	-	30,000	-	30,000	-	30,000	-	150,000	27,000

Strategic Element: 6.1 Keep discharge wastewater quality within Jordanian standards											
Strategic Objective: 6.0 Comply with applicable laws and regulations											
Coordinating Directorate: Production & Quality	Concerned Dire	ctorates: P&Q, Ops	Coordinator: Majeda Alzobee								
Target measurement: wastewater	get measurement: wastewater Current: Average: 99+% compliance 5-year Goal: 99+% compliance										
Summary Description of Plan: Ensure the compliance of water quality at the effluent of wastewater treatment plants with the Jordanian standards by the full implementation of water monitoring program. Obtain the accreditation for labs, improve and upgrade lab testing.											
Activity 1 Existing New											
Increase the scope of labs work This activity is existing one and considered new											
Activity 2	Existing	New									
Grant the national accreditation This activity is existing and new as per attached (responsibility: quality department / P&Q )											
Activity 3 Existing New											
Implement the monitoring and operational programs as per the approved testing plan This is ongoing process since there is a yearly monitoring programs (responsibility: quality department / P&Q )											

The role of Ops to be clear and to suggest possible activities such as update WI, and rehabilitation of plants

Notes:

# Strategic Element: 6.1 Keep discharge wastewater quality within Jordanian standards

Strategic Objective: 6.0 Comply with applicable laws and regulations

Coordinating Directorate: P&Q, Ops

Coordinator: Majeda Alzobee

Ensure the compliance of effluent quality at wastewater treatment plants with the Jordanian standards by the full implementation Plan description of wastewater monitoring program. Obtain the accreditation for labs, improve and upgrade lab testing.

	New/		113 113		014		015		16		2017 Total		
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
<b>Activity 1</b> -Increase the scope of labs work	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		500	-	500	-	500	-	500	-	500	-		
Total-Activity 1		500	-	500	-	500	-	500	-	500	-	2,500	-
Activity 2- Grant the national accreditation	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		4,000	-	4,000	-	4,000	-	4,000	-	4,000	-		
Total-Activity 2		4,000	-	4,000	-	4,000	-	4,000	-	4,000	-	20,000	-
Activity 3-Implement the monitoring and operational programs as per the approved testing plan	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-		-	-	-	-		
Equipment		-	-	-	-	-		-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Total		4,500	-	4,500	-	4,500	-	4,500	-	4,500	-	22,500	-

Strategic Objective: 6.0 Comply with applicable	e laws and regula	ations		
Coordinating Directorate: Legal Affairs	Concerned	l Director	ates: All	Coordinator: Suhair Munier
Target measurement: Potential revisions	Current: A	verage: N	lot applicable	<b>5-year Goal</b> : Annual review with WAJ
Summary Description of Plan: Assemble Miyahuna's suggestions for changes	to Assignment Aç	greement		
Activity 1	Existing	х	New	
In December, CEO and Directors will be asked	for suggested rev	isions to I	Miyahuna's Assignn	nent Agreement.
Activity 2	Existing	х	New	
After receiving the suggestions for change, the	suggestions will	be compil	ed and submitted to	o the CEO and Directors for review.
Activity 3	Existing	х	New	
After CEO and Director review, the CEO will su	bmit the recomme	ended cha	inges to the Manage	ement Committee for approval.
Activity 4	Existing	х	New	
After Management Committee review the reco	mmendations for	changes t	o the Assignment A	gree will be sent to WAJ for consideration.
Notes:				

# Strategic Element: 6.2 Review Assignment Agreement annually for potential revisions

Strategic Objective: 6.0 Comply with applicable laws and regulations

Coordinating Directorate: All Coordinator: Suhair Samawi

Plan description Assemble Miyahuna's suggestions for changes to Assignment Agreement.

Plan description	New/		as sugges 113		014		15		116	20	017	To	tal
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-In December, CEO and Directors will be asked for suggested revisions to Miyahuna's Assignment Agreement.	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2- suggestions will be compiled and submitted to the CEO and Directors for review.	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 2		-	-	-	-	-	-	-	-	-	-	-	-
Activity 3-CEO will submit the recommended changes to the Management Committee for approval	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 3		-	-	-	-	-	-	-	-	-	-	-	-
Activity 4-Assignment Agree will be sent to WAJ for consideration	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 4		-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	-	-	-	-	-	-	-

Strategic Element: 6.3 Ensure a safe environment for Miyahuna employees									
Strategic Objective: 6.0 Comply with applicable laws and regulations									
Coordinating Directorate: Human Resources         Concerned Directorates: All         Coordinator: Khalid Zu'bi & Esam Rahahleh									
Target measurement: Reduction of on-the-job injuries  Current: Average: To be determined previous year									

Summary Description of Plan: Work accidents frequency is considered a key indication for a healthy and safe environment. And looking to reduce this number, here are some areas which need a closer look. These main areas of enhancement are:

- 1- Training: this preventive action taken just after hiring and throughout an employee's career is essential to reduce accident frequency and severity.
- 2-Working environment: basic needs of employees in their working places provide comfortable and suitable conditions which helps the worker concentrate and work with good state of mind, which reflects on productivity without accidents.
- 3- Medical check-ups: pre-hiring, and periodic check-ups are required by law (Item 3 and 4 in Protective and Corrective Medical Care for Employees Law)
- 4- Incentive System: as violators of Health and Safety in Employment (HSE) regulations are punished, committed employees should be rewarded with a fair scheme.
- 5- Tools, Equipment and Personal Protective Equipment (PPE): many work accidents are due to faults in tools or uncomfortable PPE. However, some were bought through a process of inspection by local organizations. And considering the critical role Miyahuna does to the country and the variety of jobs and risks undertaken, specifications for tools and PPE should come a step forward to be international specifications which complies with the American Operational Safety and Health Administration.
- 6- Safety Officers: we should train and prepare officers for local and international certification to be allocated at critical locations such as water and waste water plants, labs, and operation location.

#### Activity 1 x Existing New

Training: Until this moment safety training is all theoretical not practical. And this is a major defect in safety training. We have lots of free spaces, abandoned wells and locations which could be used as a simulation area after doing some constructions. This area will include all processes carried out at Miyahuna with all possible risks.

This location and certified trainers from Miyahuna can be an attractive destination for employees seeking professional training from all over the world. Also we could train graduates from vocational training to take the specific training each according to his specialty. And for best students to be hired later on.

#### Activity 2 x Existing New

Work Environment: There are several distant locations in isolated areas. Also places working with waste water need special equipment to be ensure employee safety.

These supplies include but not limited to the following especially for employees working in shifts: coolers, refrigerators, bathrooms, showers, changing rooms, rest rooms, lockers, cookers, hygiene products etc.

#### Activity 3 Existing New

Medical check-ups: According to the Protective and Corrective Medical Care for Employees Law below, pre-hiring and periodic examination are a must. Also providing a minimum of 3 doctors and 4 nurses full time is Miyahuna category according to this law By providing a fully equipped mobile clinic with the mentioned qualified staff it should do the job for these medical check-ups and vaccines.

# Activity 4 Existing Nev

Incentive System: Encouraging employees with thank you letters, appreciation boards, cash rewards for being committed to the HSE regulations. It should be divided into three categories: best employee, best driver, and best location.

#### Activity 5 Existing New

Tools and PPE: Budget for these items should be considered carefully. Disposing expired tools and PPE should be activated. Do not save in HSE expenses! The rate of PPE and tools distribution should be monitored not to have much in stock. Also in bidding PPE should not apply to "cheapest compatible" criteria.

# Activity 6 Existing New

Safety Officers: By the HSE Supervisors and Committee Formation Law certified HSE Supervisor and internal HSE Technicians should follow the table below for each location.

#### Strategic Element: 6.3 Ensure a safe environment for Miyahuna employees

#### Strategic Objective: 6.0 Comply with applicable laws and regulations

Coordinating Directorate: All

Plan description

Coordinator: Khalid Zu'bi & Esam Rahahleh

Work accidents frequency is considered a key indication for a healthy and safe environment. And looking to reduce this number, here are some areas which need a closer look. These main areas of enhancement are:

- 1- Training: this preventive action taken just after hiring and through-out an employee's career is essential to reduce accidents frequency and severity.
- 2-Working Environment: basic needs of employees in their working places provide comfortable and suitable conditions which helps the worker concentrate and work with good state of mind, which reflects on productivity without accidents.
- 3- Medical check-ups: pre hiring, and periodic check-ups are required by law (Item 3 and 4 in Protective and Corrective Medical Care for Employees Law
- 4- Incentive System: as violators of HSE regulations are punished, committed employees should be rewarded with a fair scheme.
- 5- Tools, Equipment and PPE: many work accidents are due to faults in tools or uncomfortable PPE. However, some were bought through a process of inspection by local organizations. And considering the critical role Miyahuna does to the country and the variety of jobs and risks undertaken. Specs for tools and PPE should come a step forward to be international specs which complies with OSHA.
- 6- Safety Officers: we should train and prepare officers for local and international certification to be allocated at critical locations such as water and waste water plants, labs, and operation location.

	New/ 2013			2014 2015				20	116	2017		Total	
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Training	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	130,000	-	-		
Total-Activity 1		-	-	-	-	-	-	-	130,000	-	-	-	130,000
Activity 2- Work Environment	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	17,500	31,875	17,500	-	17,500	-	17,500		
Total-Activity 2		-	-	-	17,500	31,875	17,500	-	17,500	-	17,500	31,875	70,000
Activity 3-Medical check-ups	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	113,100	-	113,100	-	113,100	-		
Total-Activity 3		-	-	-	-	113,100	-	113,100	-	113,100	-	339,300	-
Activity 4-Incentive System	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 4		-	-	-	-	-	-	-	-	-	-	-	-
Activity 5-Tools and PPE	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		70,000	76,800	70,000	-	70,000	-	70,000	-	70,000	-		
Total-Activity 5		70,000	76,800	70,000	-	70,000	-	70,000	-	70,000	-	350,000	76,800
Activity 6-Safety Officers	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	5,000	-	5,000	-	5,000	-	-	-		
Total-Activity 6		-	-	5,000	-	5,000	-	5,000	-	-	-	15,000	-
Total		70,000	76,800	75,000	17,500	219,975	17,500	188,100	147,500	183,100	17,500		276,800

#### Strategic Element: 6.4 Comply with employment laws

#### Strategic Objective: 6.0 Comply with applicable laws and regulations

Coordinating Directorate: Human Resources Concerned Directorates: HR Coordinator: Khalid Zu'bi & Dina Sharif

Target measurement: To be determined Current: Average: To be determined 5-year Goal: 100 % compliance

Summary Description of Plan: Miyahuna is a private company and accordingly it must comply with Jordanian Labor Law. However, we comply with 96% of the items which concerns our business, which is 53 items out of 55 items. These items are briefed as follows: Item 48-c: All deductions due to violated regulations should be recorded separately...to be spent on social services for employees in the company...

Item 72: The employer who uses more than 20 female employees must prepare a suitable place under the supervision of a qualified baby sitter to look after female employees' children who are under the age of 4 years, provided that there are no less than 10 children.

Item 48-c can be handled by setting an internal policy for this fund. We already have an Activity Coordination Committee which used to arrange all social activities for employees but it has been frozen for 3 years now since no budget was allocated for it.

Item 72 can be coordinated with Technical Services to provide the sketches, the tender, and the supervision for the project. The rest will be handled by HR Department for furniture, teachers, equipment and others.

Activity 1 Existing New

Item 48-c

The average income for the above mentioned fund is 2000 JD. Social activities could include:

- 1- Payment for death of 1st family members.
- 2- Marriages.
- 3- Regular gatherings.
- 5- Gifts at certain occasions such as Labor Day, Mother's Day

Rules for spending should be written and then approved by the Ministry of Labor.

Activity 2 Existing New

Item 72

Number of female employees in the company is nearly 100 employees. Number of children under the age of 4 is nearly 50. So this item applies strongly to Miyahuna company.

A study was made in 2009 for the cost of this project, and other possible alternatives, summarized by preference as follows:

- 1- Having our own nursery which complies with Nursery Regulations. This will have a one-time cost of 4400 JD and a monthly cost of 1300 JD.
- 2- Give entitled employees an allowance of 70 JD. And this will cost 1540 JD per month.
- 3- Outsource: sign a contract with a nearby nursery which fits the basic standards. This option will cost approximately 2100 JD per month.

#### Notes:

Article (48/C): The fines imposed by virtue of this article shall be recorded in a special register in which the name of the employee, his/her wage, and the reasons of imposing the fine against him/her shall be

registered, the fines shall be assigned to providing social services to the employees of the establishment according to the decision of the Minister or whom he authorizes.

Article [72]: The employer who employs not less than twenty married women shall prepare a suitable place under the supervision of a qualified nursemaid for the children of the working women whose ages are less than four years provided that their numbers shall not be less than ten children.

# Strategic Element: 6.4 Comply with employment laws

# Strategic Objective: 6.0 Comply with applicable laws and regulations

Coordinating Directorate: HR Coordinator: Khalid Zu'bi & Dina Sharif

Miyahuna is a private company and accordingly it must comply with Jordanian Labor Law. However, we comply with 96% of the Plan description items which concerns our business, that is 53 items out of 55 items

	New/ 2013		2014		2015		2016		2017		Total		
	Existing	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX	CAPEX
Activity 1-Item 48-c	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	-	-	-	-	-	-	-	-		
Total-Activity 1		-	-	-	-	-	-	-	-	-	-	-	-
Activity 2-Item 72	New												
Labor		-	-	-	-	-	-	-	-	-	-		
Materials		-	-	-	-	-	-	-	-	-	-		
Equipment		-	-	-	-	-	-	-	-	-	-		
Other		-	-	33,000	6,600	33,000	-	33,000	-	33,000	-		
Total-Activity 2		-	-	33,000	6,600	33,000	-	33,000	-	33,000	-	132,000	6,600
Total		-	-	33,000	6,600	33,000	-	33,000	-	33,000	-	132,000	6,600